



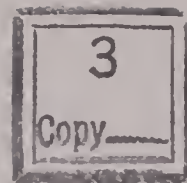
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THE BREAD BAKING INDUSTRY

Report of the
Federal Trade Commission

to

Hon. James F. Byrnes, Director,
Office of Economic Stabilization

December 1, 1942

NOT FOR PUBLICATION

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U.S. Federal Trade Commission
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FEDERAL TRADE COMMISSION

William A. Ayres, Chairman
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FEDERAL TRADE COMMISSION

WASHINGTON

W. A. AYRES
CHAIRMAN

December 1, 1942

Honorable James F. Byrnes, Director,
Office of Economic Stabilization,
Executive Office of the President,
Washington, D. C.

In re: Bread Baking Industry

Dear Director Byrnes:

In your letter dated October 23, 1942, you requested the Commission to undertake "a quick but adequate survey" of the bread and flour industries with a view to providing you with the facts to determine what economies can be made in those industries, for your use in deciding what measures would be feasible to reduce the wheat subsidy or reduce the price of bread to the consumer. The Commission, on October 23, 1942, directed that full and complete compliance be given to your request and that the work be given first priority and be expedited in every way possible. A field inquiry was begun October 26 and report forms calling for needed information were sent to a representative sample of bread baking companies on the same date that budget approval was obtained, namely, October 31, 1942.

The Commission obtained, for the year 1941, complete information on companies with aggregate sales of \$476,181,356 or over 50 percent of a total value of production reported by the United States Bureau of the Census for 1939. The total investment of these companies aggregated \$203,724,427 for the year 1941. These statistics are all for wholesale or combined wholesale or retail bread baking companies. For certain statistics a larger sample was obtained.

The principal facts developed by the inquiry are as follows:

(1) The cost of baking and wrapping bread and rolls for wholesale bakers increased from \$4.51 in March, 1942 to \$4.74 in September, 1942 per 100 pounds of bread, and the total cost to produce and sell bread and rolls increased from \$6.49 in March to \$6.70 in September, 1942;

(2) The increase of \$0.23 per 100 pounds to bake and wrap bread and rolls from March to September, 1942 resulted from an increase of \$0.16 in ingredient costs, \$0.09 in labor, \$0.01 in wrapping materials, offset by a decrease of \$0.03 in indirect labor and shop overhead;

(3) Selling, delivery, administrative and general expenses decreased \$0.02 per 100 pounds from March to September, 1942;

(4) The net loss from the return of stale bread and rolls increased from \$0.10 in March, 1942 to \$0.12 in September, 1942 per 100 pounds of bread and rolls baked;

Honorable James F. Byrnes

December 1, 1942

(5) The average profit per 100 pounds of bread and rolls was \$0.35 in March, and \$0.47 in September, 1942;

(6) Based upon total investment the average rate of profit for the companies covered ranged, for the period 1936-1941, from 10.37 percent in 1937 to 12.92 in 1938; and for the period available in 1942 the average was 15.59 percent;

(7) In 1942 the average rate of return for small companies with sales (in 1941 less than \$500,000) was 18.37 percent, for companies with sales ranging from \$500,000 to \$1,000,000 the average was 21.77 percent, for companies with sales from \$1,000,000 to \$20,000,000, the average was 17.46 percent; and the largest four companies, each with sales in excess of \$20,000,000, had the lowest average, namely, 12.81 percent;

(8) In contrast the showing for rates of return on investment, the average profit per dollar of sales was lower for the smallest size group of wholesale bakers than for the largest four companies, 2.84 cents compared with 4.52 cents in 1941, and 4.68 cents compared with 6.03 cents in 1942;

(9) 211 companies in 1941 and 236 companies in 1942 reported profits, and 44 companies in 1941 and 19 companies in 1942 had losses;

(10) 100 companies in 1941 and 145 in 1942 had profits ranging from 15 to over 95 percent on their total investment;

(11) In 1942 the profit range for 210 wholesale baking companies reporting profits was from .42 of a cent to 22.75 cents per dollar of sales, and for 25 companies making house-to-house delivery the profit range was from .34 of a cent to 13.28 cents, while the losses for 22 wholesale bakers ranged from .01 to 9.63 cents per dollar of net sales, and for 4 house-to-house companies the loss ranged from .99 cents to 4.70 cents;

(12) It is significant that the companies reporting losses from the sale of bread and rolls had higher net losses from stale returns than companies reporting profits;

(13) 156 plants in March, 1942 and 132 plants in September, 1942, out of 535 reporting, had stale returns in excess of 5 percent of the total bread and rolls produced; the highest percentage in March was 27.05 percent and in September, 17.92 percent;

(14) There was a wide range in the proportions of different ingredients used in the wide variety of bread formulas in use, based upon flour as 100 percent, the range was from 0 to 11 percent of milk, from $\frac{1}{2}$ percent to 7 percent of shortening, and from $\frac{1}{2}$ percent to 12 percent of sugar;

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December 1, 1942

(15) Milk, shortening and sugar are all critical products; if a bread formula somewhat leaner than the average of formulas now in use, were used by all bakers, there would result an annual reduction in the cost of bread and rolls produced of approximately \$5,767,000 in sugar, \$8,501,000 in shortening, and \$9,206,000 in milk, or a total of \$23,474,000, based upon the estimated 1942 production;

(16) Other savings would result from the elimination of premiums given by a small percentage of baking companies; prohibition of slicing would produce small savings and would lay the basis for greater savings through the elimination of inner wrapping and the use of lighter outer wrapping; standardization of weights and sizes within the imposed limits of pans now in use offer further opportunities for savings in cost and manpower through the elimination of varieties requiring expensive hand operation involving twisting, shaping, panning, etc.;

(17) Based upon estimates made by 104 bakers, a saving of \$0.04 per 100 pounds of bread and rolls could be obtained by reducing their output to one formula for each kind of bread (white, rye, whole wheat, raisin); this on the basis of current production would amount to not less than \$4,000,000;

(18) The greatest source of waste results from the practice of consignment selling, which when competitively used results in excessive waste which, on the basis of September, 1942 statistics, resulted in 250,000,000 pounds on an annual basis being destroyed or sold for other than human consumption;

(19) This annual waste of bread would furnish 1/3 of a pound of bread per day for a population of 2,055,000, which is 156,000 greater than the entire State of South Carolina;

(20) The cost to bake and wrap the 250,000,000 pounds of bread and rolls not sold for human consumption on the basis of September, 1942 production costs aggregates \$11,850,000;

(21) High and increasing rates of labor turnover, which has lessened efficiency and greatly increased the amount of overtime and increased wage rates have increased bakers' costs, particularly those having plants located in or near war industry centers;

(22) The average increase in labor cost from March, 1942 to September, 1942 was 9 cents per 100 pounds of bread and rolls baked, or \$10,814,000 on an annual basis;

(23) For 243 companies for which the information is available 19 officers, or 3 percent of officers for which salaries were reported, received total remuneration in excess of \$25,000 during 1941;

(24) The aggregate amount of salaries for the 19 officers receiving in excess of \$25,000 was \$665,000 or an average of \$35,000 per officer; in addition six other officials received \$25,000;

Honorable James F. Byrnes

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(25) It appears that a considerable part of the savings made by the industry in 1942 resulted from the reduction of delivery expense brought about by the Office of Defense Transportation.


It appears that the limit of savings that can be obtained through voluntary effort of the industry has been reached. The Commission, therefore, is of the opinion that the prohibition of the above enumerated practices will accomplish savings of critical foodstuffs and other materials and enable the industry to pay a substantially higher price for flour, making it possible to at least reduce the wheat subsidy, or to reduce bread prices.

It appears that in order to prevent evasion of a regulation forbidding consignment selling, it would have to be drawn so as to prohibit the return or resale to the baking company of any bread or rolls, either directly or by subterfuge. This also is the opinion of many bakers.

The Commission will be pleased to be of any further assistance to you.

By direction of the Commission.

Sincerely yours,

A handwritten signature in cursive script, reading "W A Ayres".

W. A. Ayres,
Chairman.

FEDERAL TRADE COMMISSION
REPORT OF DECEMBER 1, 1942

ON

THE BREAD BAKING INDUSTRY

TO

HON. JAMES F. BYRNES, DIRECTOR,
OFFICE OF ECONOMIC STABILIZATION

Section 1. Origin and Objective of the Inquiry

This inquiry into the Bread Baking Industry was made by the Federal Trade Commission pursuant to a request, first over the telephone on October 21, 1942, and in a letter, dated October 23, 1942, from Honorable James F. Byrnes, Director of the Office of Economic Stabilization. Director Byrnes particularly requested that the Commission undertake "a quick but adequate survey for us of the bread and flour industry, with a view to providing us with the facts to determine what economies can be made in the industry so as to remove the need of a recently approved subsidy for wheat, without reducing the return to farmers or to bring about a lowering of the price of bread to consumers."

The inquiry with respect to bread was directed to develop the facts which might enable the Economic Director to determine whether the limitation or elimination of certain practices will reduce costs of bread production "so as to remove the need for a recently approved subsidy for wheat, without reducing the return to farmers, or bring about a lowering of the price of bread."

The practices, the limitation or restriction of which it was believed might lead to cost reductions, included double wrapping of bread, returns of so-called stales, consignment selling, the use of premiums, possible savings from standardizing the production of bread, reducing the number of loaf sizes and weights and the varieties of bread, concentrating on specific standard quality loaves, possible savings in delivery by reducing cross hauls, curtailing the number of deliveries or pooling deliveries. The facts are also being obtained to disclose "the possibility of lowering profit margins and the payment of workers and officials," and to what extent "high salaries, particularly over \$25,000 a year, or bonuses are paid in the industry." Consideration is also being given to "how these various economies will effect different size units in the industry."

On October 23, 1942, "the Commission directed a full and complete compliance with the request made by Justice Byrnes, Director, Office of Economic Stabilization, in letter of October 23, 1942, in connection with this inquiry; that the work be given first priority and expedited

in every way possible; and that the Chief Economist proceed with his staff and such other members of the staff as may be assigned to make the required investigation and report, and to submit the report to the Commission at the earliest possible moment."

Conferences were held with other government departments and agencies, first at the call of Mr. Sam Lubell, Assistant to the Director of Economic Stabilization, and later at the offices of the Federal Trade Commission, to ascertain what facts were already available and what data were needed by other agencies, particularly the Office of Price Administration. Commission examiners began a canvass of the bread baking industry on October 26, 1942, and report forms, which the baking industry was requested to return in 10 days, were mailed on October 31, 1942, the same day approval was obtained from the Division of Statistical Standards of the Bureau of the Budget.

Section 2. Commission's Inquiry for Office of Price Administration

During the latter part of 1941 this Commission made an inquiry into the bread baking industry and, in its directions, stressed "the present desirability of achieving every possible savings in cost in the bread baking industry, to the end that the price of bread be kept to a minimum, in the interest, particularly, of the low-income consumer"; and it also directed that the "following marketing and distributive practices of the bread industry and their relation to and effect upon bakers' costs and consumer prices for bread:

- (1) The sale of bread by bakers to retailers on consignment.
- (2) The practice of bakers of accepting the return of stale bread remaining unsold on retailers' shelves.
- (3) The practice of delivering fresh bread daily or oftener to retail outlets.
- (4) The sale of bread of the same kind in loaves of many different sizes and weights.
- (5) The sale of bread of the same kind but of more than one grade or quality, taking into consideration particularly the marketing of so-called 'secondary' bread.
- (6) The use of premiums, combination offers, free goods, prizes and the furnishing of facilities by bakers to retailers, in connection with the sale of bread."

It was further directed, "That said investigation shall be pursued with the object of ascertaining whether the costs of producing and marketing bread and the prices paid therefor by consumers could be reduced by a modification of or an elimination of any or all of the above practices."

This inquiry for the Hon. Leon Henderson, Administrator of the Office of Price Administration, covered the financial results for the period 1936 to the middle of 1941.

Among the important facts developed by the Commission were the following:

1. The average earnings, before income taxes, for the 60 companies examined by the Commission, with nearly 24 percent of the total sales of the bakery industry, ranged from approximately 9 to 13.5 percent for their stockholders during the period 1936 to the latter part of 1941. The highest percent of earnings was for 1938 and the lowest in 1941. After the payment of income taxes, the range was from about 11 in 1938 to nearly 5.6 in 1941. There was a wide range for individual companies. Seven of the sixty companies had losses in 1938 and 14 had losses in each of the years 1940 and 1941. The rates of return for 1941 do not give full effect to price increases made during the latter part of the year. The average lower, though still substantial, earnings in 1941 resulted from substantial increases in materials and labor costs.

2. The aggregate average net profit per dollar of sales, for the companies examined, ranged from a minimum of 4.11 cents in 1941, to 6.52 cents in 1938. In 1940, the last full year covered, the average net profit was 5.35 cents for each dollar of sales. Increasing costs of wages and salaries, selling and delivery expenses and taxes, more than offset decreases in the proportion of materials costs after 1937.

3. It is estimated that if all waste of stale bread not now used for human consumption could be eliminated there could be saved by the baking industry alone annually sufficient bread to feed a population of approximately 2,055,000 individuals. Vast additional quantities of bread could also be saved in hotels and other eating places and in the homes of this country through cooperative efforts of our citizens.

4. Important contributions to the national effort to conserve motor vehicles and motor vehicle tires could be made by the bakery industry and marked reductions made in their selling and delivery expenses, which in 1940 constituted 28.8 percent of their total cost of sales, if deliveries to all types of trade could be limited to not to exceed one per day, and wherever possible, unprofitable bread routes be discontinued.

5. Other uneconomic practices such as the giving of premiums, combination offers, free goods, the furnishing of display racks gratis, entering into cooperative advertising arrangements with retail dealers, which have become an abuse in some localities, should be promptly and permanently discontinued.

The Commission found that a number of costly and uneconomic practices existed in the industry, the limitation or elimination of

which would result in material savings of flour, sugar, shortening, etc., and would make further general price increases unnecessary unless there were further marked increases in material and labor costs; and that these savings could be accomplished without reducing the quality or nutritive value of bread and without depriving consumers of essential bread products.

The Commission believed that the maximum savings in food values and labor could be attained only by the prohibition of what amounts to selling bread to the retail distributor on a consignment basis. Attention was called to the contention, particularly on the part of some wholesale bakers, that their business would be jeopardized by the elimination of consignment sales. It appeared, however, that any attempted limitation of the return of sales to a small percentage of the quantity placed on the retailers' racks would be impracticable because of the extensive policing that would probably be required to insure compliance.

It was recommended that the repetitious delivery of bread over the same route be limited to the least number possible. Special deliveries to public eating places should be limited to emergency orders in excess of the usual daily requirements. These limitations would conserve motor vehicles and tires, petroleum products and labor. Attention should also be given to combining or eliminating unprofitable delivery routes as a further conservation measure.

Abuses in respect to furnishing free bread racks and other store facilities, giving free goods, coupons, prizes, combination deals, etc., or joining in unwholesome arrangements for cooperative advertising with retailers, should be eliminated to reduce bakery costs. To further reduce costs, and conserve paper, the use of only a single wrapper should be permitted.

For the protection of the consumer and to attain further savings in cost, permissible loaf weights should be limited. The weights suggested for household bread were 16 oz., 20 oz., and 24 oz., with the weight clearly shown on the wrapper. Baked weight tolerances should be definitely specified on the wrapper.

The sale of more than one brand of bread by a given baker made under the same formula should be prohibited.

In the interest of the consumer, and with a view of preventing the sale of stale bread as fresh bread, it was suggested that consideration be given to the dating of bread.

Section 3. Cooperation of the Industry

The Commission obtained splendid cooperation from the industry. Report forms were sent to companies requesting reports covering 820 bakery plants, and at the close of business Thanksgiving Day, 535 reports had been received, or nearly 70 percent of those to whom

report forms were sent. Five reports were returned unclaimed, 18 were out of business, and 8 were excused because they were unable to furnish much of the information needed. Reports are still being returned.

A number of bakers voluntarily furnished information, and some asked that report forms be sent to their companies.

Out of 820 report forms sent to the baking industry, 584 completed reports were returned by November 30, 1942 (535 in time to be included in this report). Eighteen were returned because the concerns were out of business, 12 were excused, and five were returned unclaimed. The Commission's examiners interviewed about 300 bakers covering every phase of the inquiry.

Section 4. Bakery Industry Costs

Costs per dollar of sales in 1940. - In 1940 the cost per dollar of sales for 82 representative baking companies making a wide variety of bakery products consumed 94.70 cents of each sales dollar. The largest item of cost was that for material which averaged 38.84 cents, followed by 24.24 cents for selling expense and 12.96 cents for production labor and other payroll in costs. The following statement gives the detail for the average items of costs and expenses for 82 representative bakery companies:

Items of Income and Expense	1940	Ratios or cents per dollar of sales
<u>COST OF GOODS SOLD</u>		
Materials cost - direct.....	\$128,124,281	38.84
Production labor cost).....	42,761,315	12.96
Other payroll in costs 1/).....		
Depreciation, obsolescence, etc. - plant facilities.....	6,991,603	2.12
Corporate taxes charged to cost of goods.....	3,005,604	0.91
Social Security and pension fund payments charged to cost of goods.....	1,803,088	0.55
Repairs and maintenance.....	5,103,232	1.55
Other plant costs and operating expenses not specified.....	13,804,179	4.19
Research and development expenses included in cost of goods.....	9,196	0.002/
Cost of finished goods resold.....	8,271,867	2.51
Total cost of goods sold.....	209,874,365	63.63
Gross margin on sales.....	119,966,728	36.37
Other operating revenue or loss.....	391,070	0.12
Total gross margin.....	120,357,798	36.49
<u>SELLING, GENERAL AND ADMINISTRATIVE EXPENSES</u>		
Selling expenses.....	79,937,848	24.24
Advertising.....	8,689,850	2.63
Administrative and general office.....	11,098,261	3.36
Corporate taxes charged to selling and administrative expenses.....	807,711	0.24
Social Security and pension fund payments charged to selling and administrative expenses.....	2,135,120	0.65
Research and development expenses included in selling and administrative expenses.....	24,072	0.01
Total selling, general and administrative expenses.....	102,692,862	31.13
Net profit before provisions for uncollectible accounts.....	17,664,936	5.36
Deduct provision for uncollectible accounts.....	179,267	0.06
Net profit from manufacturing and trading.....	17,485,669	5.30

1/ Except labor included in repairs and maintenance and research and development expenses.

2/ Less than 0.005 percent.

In addition to the labor and payroll cost in bakery plants, there is labor cost in a number of other items, which aggregates 31.58 cents per dollar of sales, as shown in the following statement:

Wage Classifications	Amount	Per Dollar of Sales
Production labor cost - direct)		
Other payroll in cost of goods).....	\$ 42,695,794	12.94
Payroll in repairs and maintenance.....	2,464,460	0.75
Payroll and commissions in selling expense..	54,239,133	16.45
Payroll in advertising expense.....	1,050,544	0.32
Payroll in administrative and general office expenses.....	1/ 3,698,146	1.12
Total.....	\$104,148,077	31.58

1/ Includes officers' salaries for one company not segregable.

Cost to produce and sell bread and rolls--1942. - In the present inquiry information concerning the costs of production and sale of bread and rolls was tabulated for 374 individual bread baking plants, of which 347 were engaged in the wholesale business and 27 in the retail house-to-house business. Such information for these plants is presented for an accounting period including March 31, 1942 and for an accounting period including September 30, 1942. The accounting period generally covers operations for a four or five week period, but some companies reported for a longer period.

The 347 plants whose products were distributed at wholesale baked 339,864,239 pounds of bread and rolls during the March cost period and 376,357,154 pounds of bread and rolls during the September period. The costs, expenses and profits per 100 pounds of bread and rolls produced by these plants during each period are compared below:

	March 1942 period per 100 lbs.	September 1942 period per 100 lbs.	Increase or Decrease* per 100 lbs.
Net Sales.....	\$6.84	\$7.17	\$0.33
Cost to produce and wrap:			
Materials (flour and other ingredients).....	2.75	2.91	0.16
Direct labor.....	0.71	0.80	0.09
Indirect labor and shop overhead.....	0.62	0.59	*0.03
Wrapping material.....	0.43	0.44	0.01
Total cost to produce and wrap.....	4.51	4.74	0.23
Gross profit from sales.....	2.33	2.43	0.10
Selling and delivery expense:			
Routemen's and supervisors' compensation.....	0.83	0.85	0.02
Delivery vehicle expense.....	0.33	0.28	*0.05
Other selling expenses.....	0.47	0.49	0.02
Total selling and delivery expenses.....	1.63	1.62	*0.01
Administrative and general expenses.....	0.35	0.34	*0.01
Total selling, delivery and administrative and general expenses.....	1.98	1.96	*0.02
Total cost to produce and sell.....	6.49	6.70	0.21
Net profit.....	0.35	0.47	0.12

As shown above, the total cost to produce and sell bread and rolls by the 347 plants increased \$0.21 per 100 pounds. The principal items of increase in the costs and expenses were for flour and other ingredients and direct labor, which increased \$0.16 and \$0.09 per 100 pounds, respectively. It will be noted that delivery vehicle expense and indirect labor and shop overhead in the production departments decreased between the two periods. Delivery expense decreased \$0.05 per 100 pounds. The increased volume of production in bread and rolls probably accounts for the \$0.03 per 100 pounds decrease in indirect labor and shop overhead between the two periods.

The following tabulation expresses the results of operations of the 347 plants for the March and September periods in relation to dollar sales:

	March 1942 period	September 1942 period
Total net sales.....	\$23,258,122	\$26,982,056
<u>Cents per dollar of net sales:</u>		
Net sales.....	100.00	100.00
Cost to produce and wrap:		
Materials.....	40.22	40.59
Direct labor.....	10.36	11.14
Indirect labor and shop overhead.....	9.07	8.26
Wrapping material.....	6.24	6.09
Total cost to produce and wrap.....	65.89	66.08
Gross profit from sales.....	34.11	33.92
Selling and delivery expense:		
Routemen's and supervisors' compensation.....	12.21	11.78
Delivery vehicle expense.....	4.77	3.87
Other selling expenses.....	6.89	6.89
Total selling and delivery expenses.....	23.87	22.54
Administrative and general expenses.....	5.05	4.76
Total selling, delivery and administrative and general expenses.....	28.92	27.30
Total cost to produce and sell.....	94.81	93.38
Net profit on sales.....	5.19	6.62

Further details of the operations of the 347 plants that do a wholesale business are presented in the following table for the March and September, 1942 cost periods. This table summarizes the costs, expenses and profits per 100 pounds of bread and rolls produced by the plants according to their location in the following six geographical areas:

1. Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, District of Columbia, Delaware, Virginia and West Virginia.
2. North Carolina, South Carolina, Georgia, Florida, Tennessee, Mississippi, Alabama.
3. Ohio, Indiana, Illinois, Wisconsin, Michigan, Kentucky.
4. Louisiana, Texas, Arkansas, Kansas, Missouri, Iowa, Nebraska, South Dakota, North Dakota, Montana, Minnesota, Colorado, Oklahoma.
5. Washington, Oregon, Utah, Wyoming, Idaho.
6. California, Arizona, New Mexico, Nevada.

COSTS, EXPENSES AND PROFITS PER 100 POUNDS OF BREAD AND ROLLS PRODUCED BY
347 PLANTS THAT DISTRIBUTE PRODUCTS AT WHOLESALE, ARRANGED BY GEOGRAPHICAL
LOCATIONS, FOR THE COST PERIODS INCLUDING MARCH 31 AND SEPTEMBER 30, 1942

Period including March 31, 1942	Area #1 132 plants	Area #2 40 plants	Area #3 71 plants	Area #4 79 plants	Area #5 10 plants	Area #6 15 plants	Total all areas 347 plants
Total pounds produced.....	137,572,043	20,150,778	62,462,914	78,442,321	9,900,314	31,335,896	339,864,239 lbs.
Net sales, per 100 pounds of bread and rolls produced.....	\$ 7.29	\$ 7.32	\$ 7.14	\$ 5.80	\$ 6.86	\$ 6.58	\$ 6.84
Cost of producing and wrapping:							
Cost of materials.....	2.90	2.96	2.89	2.33	2.64	2.79	2.75
Direct production labor.....	0.77	0.67	0.73	0.60	0.82	0.69	0.71
Indirect labor and productive overhead.....	0.69	0.55	0.68	0.53	0.60	0.48	0.62
Cost of wrapping material.....	0.43	0.50	0.47	0.36	0.42	0.42	0.43
Total cost of producing and wrapping.....	4.79	4.68	4.77	3.82	4.48	4.38	4.51
Gross profit from sales.....	2.50	2.64	2.37	1.98	2.38	2.20	2.33
Selling and delivery expenses:							
Routemen's and supervisors' compensation.....	0.97	0.69	0.91	0.61	0.65	0.82	0.83
Delivery vehicle expenses.....	0.38	0.34	0.32	0.29	0.23	0.21	0.33
Other selling expenses.....	0.48	0.74	0.41	0.41	0.67	0.46	0.47
Total selling and delivery expenses.....	1.83	1.77	1.64	1.31	1.55	1.49	1.65
Administrative and general expenses.....	0.38	0.41	0.33	0.28	0.30	0.39	0.35
Total selling, delivery, administrative and general expenses.....	2.21	2.18	1.97	1.59	1.85	1.88	1.98
Total cost to produce and sell.....	7.00	6.86	6.74	5.41	6.33	6.26	6.49
Net profit on sales.....	0.29	0.46	0.40	0.39	0.53	0.32	0.35
Period including September 30, 1942							
Total pounds produced.....	155,339,429	23,569,092	69,535,762	79,868,039	12,867,901	35,176,931	376,357,154 lbs.
Net sales, per 100 pounds of bread and rolls produced.....	\$ 7.37	\$ 7.37	\$ 7.24	\$ 6.91	\$ 6.97	\$ 6.67	\$ 7.17
Cost of producing and wrapping:							
Cost of materials.....	2.98	3.01	2.92	2.77	2.75	2.89	2.91
Direct productive labor.....	0.83	0.72	0.80	0.75	0.97	0.78	0.80
Indirect labor and productive overhead.....	0.62	0.55	0.65	0.55	0.57	0.48	0.59
Cost of wrapping materials.....	0.43	0.49	0.46	0.42	0.42	0.43	0.44
Total cost of producing and wrapping.....	4.86	4.77	4.83	4.49	4.71	4.58	4.74
Gross profit from sales.....	2.51	2.60	2.41	2.42	2.26	2.09	2.43
Selling and delivery expenses:							
Routemen's and supervisors' compensation.....	0.95	0.63	0.90	0.71	0.67	0.79	0.85
Delivery vehicle expense.....	0.30	0.38	0.26	0.26	0.19	0.21	0.28
Other selling expenses.....	0.49	0.60	0.42	0.51	0.74	0.44	0.49
Total selling and delivery expenses.....	1.74	1.61	1.58	1.48	1.60	1.44	1.62
Administrative and general expenses.....	0.34	0.39	0.35	0.32	0.27	0.37	0.34
Total selling, delivery, administrative and general expenses.....	2.08	2.00	1.93	1.80	1.87	1.81	1.96
Total cost to produce and sell.....	6.94	6.77	6.76	6.29	6.58	6.39	6.70
Net profit on sales.....	0.43	0.60	0.48	0.62	0.39	0.28	0.47

During each of the accounting periods including March 31, 1942 and September 30, 1942, the 27 plants that distribute their products at retail from house to house baked 27,862,513 and 29,096,771 pounds of bread and rolls, respectively. The sales realization, costs and profits from the operations of these plants are compared for each cost period in the following tabulation:

	March 1942 period	Sept. 1942 period	Increase or Decrease*
	per 100 lbs.	per 100 lbs.	per 100 lbs.
Net Sales.....	\$8.91	\$8.93	\$0.02
Cost to produce and wrap:			
Materials (flour and other ingredients).....	2.95	3.40	0.45
Direct labor.....	0.73	0.78	0.05
Indirect labor and shop overhead....	0.72	0.71	*0.01
Wrapping material.....	0.37	0.39	0.02
Total cost to produce and wrap....	4.77	5.28	0.51
Gross profit from sales.....	4.14	3.65	*0.49
Selling and delivery expense:			
Routemen's and supervisors' compen- sation.....	1.96	1.81	*0.15
Delivery vehicle expense.....	0.73	0.57	*0.16
Other selling expenses.....	0.53	0.42	*0.11
Total selling and delivery expenses.....	3.22	2.80	*0.42
Administrative and general expenses....	0.43	0.39	*0.04
Total selling, delivery and administrative and general expenses.....	3.65	3.19	*0.46
Total cost to produce and sell....	8.42	8.47	.05
Net profit.....	0.49	0.46	*0.03

As shown above, there was a net increase of \$0.05 per 100 pounds in the cost of producing and selling bread and rolls by the 27 plants that distribute their products at retail from house-to-house, and is accounted for by an increase in cost of production and wrapping materials of \$0.51 per 100 pounds between the two periods, less a decrease of \$0.46 per 100 pounds in selling, delivery and general and administrative expenses. The largest cost increase was in flour and other ingredients which accounted for an increase of \$0.45 per 100 pounds for materials. The principal decreases in other costs were in selling and delivery which decreased \$0.42 per 100 pounds between the two periods,

accounted for by decreases of \$0.15, \$0.16 and \$0.11 per 100 pounds, respectively, in routemen's and supervisors' compensation, delivery vehicle expenses, and other selling expenses incurred in connection with the distribution of bread and rolls.

The operating results of the 27 plants for each cost period are expressed in relation to dollar sales in the following tabulation:

	March 1942 period	September 1942 period
Total net sales.....	\$2,482,319	\$2,597,699
<u>Cents per dollar of net sales:</u>		
Net sales.....	100.00	100.00
Cost to produce and wrap:		
Materials.....	33.14	38.09
Direct labor.....	8.21	8.69
Indirect labor and shop overhead.....	8.03	7.98
Wrapping material.....	4.12	4.35
Total cost to produce and wrap.....	53.50	59.11
Gross profit from sales.....	46.50	40.89
Selling and delivery expense:		
Routemen's and supervisors' compensation.....	22.00	20.24
Delivery vehicle expense.....	8.17	6.34
Other selling expenses.....	5.95	4.75
Total selling and delivery expenses..	36.12	31.33
Administrative and general expenses.....	4.90	4.37
Total selling, delivery and administrative and general expenses.....	41.02	35.70
Total cost to produce and sell.....	94.52	94.81
Net profit on sales.....	5.48	5.19

Losses on Stales. - The operating results that have been presented in the preceding paragraphs for the 347 plants that distribute their products at wholesale and for the 27 plants that distribute their products at retail from house-to-house reflect losses incurred from returns of stale bread and rolls.

The losses on stale returns for the 347 wholesale plants were equivalent to \$0.10 per 100 pounds of bread and rolls produced during the accounting period including March 31, 1942, and \$0.12 per 100 pounds produced during the accounting period including September 30, 1942, an increase of \$0.02 per 100 pounds.

The following tabulation gives for the 347 wholesale plants the poundage of stale returns in relation to the total pounds of bread and rolls produced and the net loss from stales per 100 pounds of production for the March and September periods:

Losses on Stales - 347 Wholesale Plants

	Period including Mar. 31, 1942	Period including Sept. 30, 1942
1. Poundage of bread and rolls produced.....	339,864,239	376,356,614
2. Poundage of stale returns.....	19,511,855	18,288,596
3. Percentage of stale returns.....	5.72%	4.86%
4. Poundage of stales sold for human consumption.....	12,590,156	9,584,195
5. Poundage of stales otherwise sold or disposed of.....	6,921,699	8,704,401
6. Percentage of stale returns not sold for human consumption....	2.04%	2.31%
7. Cost to produce and wrap, per 100 lbs. of production.....	\$4.51	\$4.74
8. Realization from sale of stales, per 100 lbs.	\$4.41	\$4.62
9. Net loss from stales, per 100 lbs. of production.....	\$0.10	\$0.12

In connection with the above table, it is significant that the companies reporting losses from the sale of bread and rolls sustained higher net losses from stale returns than the companies reporting profits. During the March cost period, 51 of the 347 plants sustained losses from operations of \$0.27 per 100 pounds of bread and rolls produced, while their losses from stale returns amounted to \$0.20 per 100 pounds. During the September period, 44 of the 347 plants sustained losses from operations of \$0.24 per 100 pounds of bread and rolls produced, while their losses from stale returns amounted to \$0.18 per 100 pounds. From this it can be seen that the losses from stale returns contributed materially to the overall losses from operations during each period.

The losses on stale returns for the 27 house-to-house plants were much lower during each accounting period than for the 347 wholesale plants. During the March period the average loss on stales for the house-to-house plants was \$0.003 per 100 pounds of bread and rolls produced; during the September period the loss was \$0.04 per 100 pounds.

The following tabulation gives for the 27 house-to-house plants the poundage of stale returns in relation to the total pounds of bread and rolls produced, and the net loss from stales per 100 pounds of production for the March and September periods:

Losses on Stales - 27 House-to-House Plants

	Period including Mar. 31, 1942	Period including Sept. 30, 1942
1. Poundage of bread and rolls produced.....	27,862,513	29,096,771
2. Poundage of stale returns.....	1,490,081	1,507,360
3. Percentage of stale returns....	5.44%	5.25%
4. Poundage of stales sold for human consumption.....	1,347,040	1,314,549
5. Poundage of stales otherwise sold or disposed of.....	143,041	192,811
6. Percentage of stale returns not sold for human consumption...	0.51%	0.66%
7. Cost to produce and wrap, per 100 pounds of production.....	\$4.770	\$5.28
8. Realization from sale of stales, per 100 pounds.....	4.767	5.24
9. Net loss from stales, per 100 pounds of production.....	0.003	0.04

Percentage of stale returns. - As shown in the two preceding tables, the percentage of stale returns decreased during the accounting period including September 30, 1942, as compared with the period including March 31, 1942. For the 347 wholesale plants, the proportion of production returned as stale bread and rolls was 5.72% in the March period and 4.86% in the September period. These percentages reflect a marked decrease from the proportion of production returned as stales during 1941. In that year the stale returns averaged 7.20%.

In 1941, the percentage of stales sold for human consumption was 3.93%, and the percentage of stales used for animal food or destroyed was 3.27%. During the accounting period including September 30, 1942, the percentage of stales sold for human consumption was 2.55%, while the percentage of stales used for animal food or destroyed was 2.31%.

While in general the reduction in the proportion of total production returned as stales has decreased considerably since last year, the stale returns are still high in many sections of the country. For individual plants, the proportion of stale returns varies widely--from reports of no returns to a maximum of 27.05%. The following tabulation shows the variation in the percentages of stale returns for 177 plants, and their locations by States, having a minimum of stale returns of 5% in either the March or September accounting period:

	<u>March</u>	<u>Sept.</u>		<u>March</u>	<u>Sept.</u>
Nebraska	27.05%	17.92%	Texas	9.16%	6.91%
Nebraska	21.07	16.07	Rhode Island	5.41	6.89
Georgia	15.00	15.00	Massachusetts	8.93	6.89
Kentucky	15.00	14.99	California	7.79	6.86
Kansas	20.81	13.29	Maryland	6.89	6.83
Maryland	17.03	12.37	Indiana	5.68	6.81
Wisconsin	15.21	12.37	Pennsylvania	5.11	6.80
Maryland	16.70	12.30	Massachusetts	8.83	6.77
Illinois	10.02	12.02	Iowa	7.37	6.74
Kansas	11.96	10.31	Texas	9.50	6.64
Illinois	7.53	10.15	New York	7.64	6.58
North Carolina	11.36	9.97	Pennsylvania	6.73	6.46
Georgia	8.03	9.73	Louisiana	10.25	6.40
North Carolina	9.26	9.63	Illinois	5.51	6.38
Missouri	13.11	9.56	Washington	7.63	6.30
Illinois	10.77	9.48	Alabama	6.89	6.26
New York	9.32	9.41	Illinois	4.65	6.26
Ohio	8.39	9.34	Massachusetts	8.57	6.25
Wisconsin	15.86	9.21	Kansas	7.56	6.22
Colorado	9.00	9.00	Texas	9.18	6.15
New York	10.02	8.94	Minnesota	6.30	6.14
New York	9.93	8.94	Michigan	10.85	6.09
Illinois	11.87	8.90	Kansas	6.25	6.09
West Virginia	5.94	8.82	Michigan	7.15	6.05
Virginia	8.85	8.65	Utah	11.10	6.04
New Hampshire	11.17	8.58	Washington	5.75	6.02
Maryland	10.15	8.55	Iowa	7.13	6.01
Illinois	9.10	8.47	Iowa	5.59	5.99
Washington	8.87	8.47	Louisiana	5.26	5.97
Iowa	11.04	8.36	Pennsylvania	3.70	5.95
Missouri	8.98	8.35	Kansas	3.25	5.95
Florida	6.46	8.33	New York	4.76	5.86
Alabama	9.98	8.30	Wisconsin	7.19	5.85
Missouri	7.36	8.26	Virginia	4.22	5.82
Iowa	8.39	8.17	Pennsylvania	7.48	5.80
Texas	11.26	8.16	California	8.03	5.78
Ohio	8.38	8.07	New Jersey	4.57	5.74
Arkansas	7.50	8.03	Indiana	5.47	5.73
Texas	11.82	7.88	Ohio	8.67	5.70
Oklahoma	6.12	7.85	Iowa	5.22	5.70
New Jersey	8.20	7.80	Maryland	5.81	5.65
Nebraska	8.57	7.72	Ohio	5.16	5.65
Rhode Island	9.37	7.71	New York	6.25	5.64
Texas	6.74	7.64	Missouri	5.07	5.64
Connecticut	9.17	7.63	Massachusetts	5.60	5.61
Iowa	9.80	7.60	Virginia	6.99	5.61
North Carolina	6.65	7.43	Nebraska	5.71	5.58
Massachusetts	7.92	7.40	North Carolina	5.03	5.55
Louisiana	8.14	7.36	Massachusetts	4.19	5.54
New York	10.22	7.12	Georgia	5.36	5.51
Illinois	6.13	7.01	Missouri	4.23	5.49
New York	6.07	6.97	West Virginia	4.51	5.48
North Carolina	8.12	6.95	New Jersey	8.09	5.45

	<u>March</u>	<u>Sept.</u>		<u>March</u>	<u>Sept.</u>
Maryland	3.79%	5.42%	New York	5.25%	4.55%
Georgia	5.02	5.39	Illinois	7.60	4.53
California	4.16	5.39	New Mexico	6.18	4.49
Missouri	4.61	5.36	Michigan	6.82	4.44
California	5.99	5.34	D. C.	6.87	4.41
Florida	5.42	5.34	Vermont	5.44	4.39
New Jersey	7.23	5.31	Texas	5.68	4.34
New York	10.03	5.30	Ohio	5.49	4.33
Illinois	5.21	5.30	California	7.04	4.31
Missouri	6.28	5.27	Michigan	5.11	4.28
New Hampshire	7.13	5.26	Mississippi	6.41	4.27
California	5.67	5.25	Ohio	6.59	4.26
New Hampshire	3.70	5.17	Michigan	6.50	4.26
New York	4.49	5.16	New York	7.52	4.21
Maryland	6.70	5.12	Michigan	5.94	4.18
Pennsylvania	4.99	5.11	New York	6.46	4.17
Minnesota	3.75	5.11	Maine	5.76	4.16
Pennsylvania	4.89	5.07	Michigan	6.30	4.15
California	4.15	5.07	Idaho	5.27	4.12
California	7.33	5.06	Maryland	5.49	4.09
Pennsylvania	4.57	5.06	D. C.	5.17	4.08
Indiana	6.20	5.05	Kentucky	5.11	4.05
Iowa	4.25	5.04	Michigan	6.44	3.98
Missouri	2.74	5.02	New York	6.88	3.97
Louisiana	6.55	5.01	Pennsylvania	5.12	3.92
Ohio	3.77	5.01	Minnesota	5.50	3.91
New York	5.15	4.99	Colorado	5.03	3.89
Mississippi	7.33	4.85	New York	5.82	3.86
New York	5.53	4.83	Ohio	5.51	3.78
Colorado	5.50	4.83	Pennsylvania	7.31	3.75
Georgia	5.63	4.81	California	8.96	3.72
Texas	5.46	4.79	Mississippi	6.17	3.44
Ohio	5.54	4.78	South Dakota	6.07	3.18
Oklahoma	5.43	4.74	Kansas	5.93	2.84
Texas	5.70	4.73	South Dakota	5.72	1.53
Michigan	8.19	4.63			

Section 5. Possible Savings of Critical Breadstuffs

Bakers were asked to state the percentages (based on flour content) represented by milk, shortening and sugar used in their leading white loaf bread. The striking feature of the information furnished by more than 500 bakeries was the wide variation in percentages used in their leading product. For milk powder the percentages ranged from none to a high of 11.00 percent, with most formulas within the range of 3 to 5 percent. For shortening, the percentages ranged from half of 1 percent to 8 percent, the majority falling in the range of 3 to 4 percent. Many bakers used no more than 2 percent and a considerable number used 5 percent. For sugar, the percentages reported ranged from less than one percent to a maximum of 12 percent, the largest number falling within the range of 5 to 7 percent.

These showings coincide closely with the quantities shown in an "average quality" formula used by Associated Retail Bakers of America in their Bulletin #86 of August 18, 1941, which gave an average of 3.71 percent for milk powder, 2.97 percent for shortening, and 5.94 percent for sugar.

The typical lean, average and rich formulas based on percentages of shortening used are shown in the table below. In basing selections on shortening alone it is recognized that shortening is only one element in the richness of bread as is noted below.

Table 1 . Typical percentages of Milk, Shortening and Sugar used by Bakers in Leading Loaves.
(Relative "richness" of formulas based on percentage of shortening used.)

<u>Milk</u> %	<u>Shortening</u> %	<u>Sugar</u> %
<u>Lean Formulas</u>		
.0	0.50	0.50
.0	1.00	2.01
1.00	1.00	8.00
4.00	1.25	7.00
4.50	1.50	6.00
2.40	1.50	4.60
3.00	2.00	6.00
11.00	2.25	4.75
<u>Average Formulas</u>		
4.00	2.50	4.50
6.00	2.50	8.50
3.66	2.75	5.50
4.00	3.00	6.00
.60	3.00	7.25
10.00	3.25	6.00
3.35	3.75	7.88
2.80	3.80	6.85
5.00	4.00	7.00
6.00	4.00	6.00
2.00	4.00	10.00
<u>Rich Formulas</u>		
3.00	4.50	6.30
5.00	4.50	7.25
2.50	4.50	4.45
6.00	5.00	6.00
0	5.00	5.00
6.00	5.00	8.00
4.00	5.25	5.00
6.00	6.00	6.00
4.00	6.00	8.00
0	6.00	12.00
3.50	6.00	6.50
6.00	7.00	3.00
7.50	8.00	10.00

Shortening used ranges from half of 1 percent to 8 percent. In the tabulation, percentages of shortening up to 2.25 percent have been more or less arbitrarily classed as lean formulas, percentages from 2.5 to 4.0 percent as average formulas, and percentages of 4.5 and over as rich formulas. This method of selecting formulas has the effect of classing some formulas that are relatively high in overall richness based on all three ingredients combined as lean formulas as in the case of the last formula in the lean formula group. The same is true of some formulas in the other two groups.

The table brings out rather concretely the wide variation in practice among bakers in the use of each of the three critical materials in making their leading loaves. In giving their product distinctive characteristics, bakers use the different ingredients in widely differing percentages. Some use relatively small proportions of one ingredient and relatively large proportions of one or both of the other two, while others use relatively large proportions of all three. This difference in practice is evident in all three of the formula groups shown in the Table. In all groups there is evidence that a low proportion of one ingredient is compensated by high percentages of one or both of the other two. In general, also it will be noted that rich formulas carry high proportions of all three critical ingredients.

If breads of satisfactory nutritive value can be made, for instance, with percentages not exceeding 2.5 percent of shortening, 4.5 percent of sugar and 3 percent milk, it would seem that marked savings in critical materials might be accomplished by decreasing sharply the proportions used in making richer breads, the formulas for which call for milk up to 10 or more percent, shortening up to 8 or more percent, and sugar up to 12 or more percent. Consumers would suffer some loss of ability to satisfy their taste for breads of distinctive flavor or texture, but this would be an inconvenience rather than a hardship. Bakers who were obliged to change the characteristics of their leading loaves might suffer some loss of business. For this reason whatever is judged necessary as a war measure should be done by general order, equitably enforced, to insure its observance by all bakers affected.

According to the data furnished by the 500 bakers, it is evident that the majority find it possible to make satisfactory white pan bread with percentages of these three critical materials approximating the Associated Retail Bakers' average quality formula. Many bakers find formulas leaner than the Associated Retail Bakers' average satisfactory for their leading loaf bread. Savings can unquestionably be made on many formulas widely used. With sugar already rationed, a shortage of milk and other dairy products already developed and a scarcity of shortening in the offing, the use of more than the proportions in the average formula is a waste of critical materials.

With respect to shortening, a successful independent baker, in a letter dated November 22, 1942, stated:

"I wish to emphasize it is my belief that 1 percent lard in the formula of bread would be sufficient, and the recent tests I have made will verify this statement.

"I am convinced the wheat kernel flavor predominates by the elimination of 2 percent lard. The two loaves I sent to you, with 1 percent lard content, will show the increased 'Wheatie' flavor, although the keeping qualities may be slightly lessened by the bread's drying out sooner if exposed, but it will not mold as soon as the 3 percent lard loaf.

"It is reasonable to believe that the very large bakery combines will resent a reduction of 2 percent in lard. This will be understandable because, due to their tremendous buying power, they will receive the necessary allotment to produce the 3 percent lard loaf. The smaller competitor will probably be deprived of any lard, if some conservation plan is not inaugurated."

In this connection it is to be noted that decreasing shortening or sugar or milk in a formula has the effect of increasing the proportions used of other ingredients so that the net loss of food value is the difference between the food value of the ingredient reduced and the food value of the added proportions of other ingredients, of which flour is the principal one by weight. On this subject, the Director of the Commission's Medical Advisory Division states:

"The reduction of the fat content of bread from 3% to 1% and the substitution of 2% more flour will cause the average 1-oz. slice of bread to provide 3.3 fewer calories. This means that in the case of an individual consuming eight slices of bread daily, his caloric intake will be reduced by approximately 26 calories. Since an ordinary slice of bread supplies between 70 and 80 calories it will be seen that this deficiency can be made up by consuming approximately 1/3 slice more of bread daily or an equivalent amount of other foods. Dietary standards are customarily computed on the basis of total intake of 3,000 calories daily, so that the 26 calories represents less than 1% of the total intake. Because of these facts it is not believed that the reduction of the fat content of bread from 3% to 1% represents a significant debasement from the standpoint of its nutritive value."

" * * * Bread made without the addition of fat (shortening) or whole milk contains approximately 1% of fat derived from the flour. Commercial bakers usually add additional fat to their bread mixes, the proportion ranging from one pound of fat per 100 pounds of flour to around four pounds of fat per 100 pounds of flour. Sometimes instead of adding fat as such the bakers will use whole milk, which of course adds butter fat to the mix. The addition of higher proportions of fat to a bread mix will produce a bread having slightly better texture and appearance. However, improvement in texture and appearance may also be brought about by the use of substances other than fat such as

skim milk powder, malt syrup, or some particular type of yeast food. The addition of larger proportions of fat or milk solids will sometimes result in the use of more water in the bread mix and the retention of a slightly higher proportion of water in the finished article. This will, of course, compensate in part for the expense involved in using additional fat.

"The changes in the appearance and texture of the bread which are brought about by the addition of fat and other substances to the basic ingredients of bread are for the most part comparatively slight. Experts in the art of baking can detect them and sometimes the differences are of such degree that an ordinary housewife could detect them if cut loaves of the bread were placed side by side before her. It is rare, however, that these changes in texture and appearance are such that the housewife would seriously object to either of any two given brands of bread when one brand is purchased and used on one day and another brand purchased and used one or two days later without making an actual side by side comparison."

Moreover, as stated by the Commission's Medical Advisor, the savings of fat --

" * * would be of considerable importance at this time since fat contains approximately 10% of glycerin, a substance much needed for the manufacture of explosives."

This is important because for some time the housewives of the United States have been asked by the Government in the salvage campaign to save as much fat as possible.

It is impossible from data available to compute the exact savings that might be made in the use of sugar, shortening and milk: but by applying an average formula to total commercial bread production, however, it is possible to estimate somewhat roughly the total quantities of different ingredients used in commercial baking and to obtain therefrom a more or less rough estimate of possible savings. This estimate has been prepared, based on formula percentages reported for white bread and total poundages of bread and rolls produced. This, at best, can only be regarded as a rough estimate for the reason that total bread and rolls produced undoubtedly includes many items made under formulas that are richer as well as many made under formulas that are leaner in terms of milk solids, shortening and sugar than the best selling loaves of white pan bread on which the various bakeries reported.

The method pursued in the estimate was to weight the percentages of each of the three critical materials by the total quantity of bread and rolls produced as reported by a total of 465 bakeries consisting of 420 wholesale, 36 house-to-house and 9 chain store bakeries and, based on these weightings, to compute the weighted average percentage of each of the items for the sample. These weighted average percentages were then applied to a total production figure for 1942 estimated as 18.9 percent greater than the total commercial production of bread and yeast raised products by both wholesale and retail bakers as reported by the

Bureau of the Census for the year 1939, to obtain the total quantity of each of the critical materials used in the production of the estimated total production. The increase of 18.9 percent used is the trade's estimate of the increase since 1939.^{1/} The estimated production so obtained for 1942 is regarded as conservative since the Bureau of the Census collected no data from establishments or plants with products valued at less than \$5,000 for the year.

The estimated total production of yeast raised products, for 1942, obtained as described above, is 12,423,000,000 pounds of bread which, on the basis of 65 percent flour content, would contain 8,074,950,000 pounds of flour.

Based on the Commission's sample the average formulas used by the different classes of bakers reporting for the September accounting period were as follows:

Company Group	Number of Bakeries	Weighted Average Formula Percentages (Based on Flour)		
		Milk	Shortening	Sugar
Big 4 companies.....	56	3.05	3.29	6.40
Large independent companies.....	81	4.86	3.33	6.37
Smaller independent companies.....	283	3.66	3.18	5.95
Total wholesale bakers.....	420	3.84	3.29	6.27
House-to-house bakers.....	36	3.33	3.20	6.05
Chain grocery bakers.....	9	4.12	3.55	5.32
Total all groups.....	465	3.80	3.29	6.21

Applying the formula percentages for all groups to total flour content of yeast raised products of 8,074,950,000 pounds yields the following estimates of the total quantities of the three critical materials:

Milk..... 306,848,000 pounds
Shortening..... 265,666,000 pounds
Sugar..... 501,454,000 pounds

Based on these quantities it is possible to estimate what the critical material savings would be if total consumption of each were reduced by any specified percentage. Such estimates, based on 5, 10 and 20 percent reductions in quantities, and corresponding dollar values based on 5.75 cents per pound for sugar, 15 cents for powdered milk and 16 cents for lard, would be as follows:

Material	5 Percent (Pounds)	Estimated Savings 10 Percent (Pounds)	20 Percent (Pounds)
Estimated Saving-in Materials:			
Milk.....	15,342,000	30,685,000	61,370,000
Shortening.....	13,283,000	26,567,000	53,133,000
Sugar.....	25,073,000	50,145,000	100,291,000
Estimated Dollar Savings:			
Milk.....	\$2,301,000	\$ 4,603,000	\$ 9,206,000
Shortening.....	2,125,000	4,251,000	8,501,000
Sugar.....	1,442,000	2,883,000	5,767,000
Total.....	\$5,868,000	\$11,737,000	\$23,474,000

^{1/} Published recently in the Trade Press.

The making of savings of the order indicated above would hinge upon what would be practicable to do in reducing the quantities of these critical materials without reducing the nutritive value of bread to such a point as to endanger public health. The Army at present uses 6 percent milk, 5 percent shortening and only 3 percent sugar to produce a bread of high energy content. These percentages are higher for milk and shortening, but lower than the sugar content of the weighted average formula. Some claim, and possibly this claim is well founded, that the milk content should be maintained because milk supplies the enriching agent riboflavin, the commercial supply of which is short. It would seem, however, that marked savings in the other two critical ingredients might be made, and possibly some saving in milk.

Some bakers state that even greater savings could be accomplished without materially reducing the food value or the public acceptance of their product, provided, of course, the entire industry participates in the saving. The conflict of competitive interest in formulas used is believed to be such that the most effective savings can be accomplished only by government order. This type of order would be distinctly in the direction of a "victory" loaf.

Under conditions of shortage during World War No. I, Food Administration Rules in effect December 1, 1917, affecting bakery licensees limited the use of milk shortening and sugar as follows:

Milk, not to exceed 6 pounds of fresh skim milk from which butterfat was extracted, or the equivalent thereof per 196 pounds of flour.

Shortening, not to exceed 2 pounds of compounds containing more than 15 percent animal fats, or 2 pounds of vegetable fats,, per 196 pounds of flour.

Sugar, not to exceed 3 pounds of cane or beet, sugar or $3\frac{1}{2}$ pounds of corn sugar, per 196 pounds of flour.^{2/}

The limitation of the use of milk, shortening and sugar to the amounts specified by the U. S. Food Administration during World War No. I would result in reductions equivalent to 21 percent in milk solids 70 percent in shortening, and 76 percent in sugar, below the weighted average formula now in use, as reported by the bakers in this inquiry.

Section 6. Economies in the Slicing and Wrapping of Bread

The slicing and wrapping of bread prior to its sale to the consumer is an almost universal practice of some 15 years standing among bakers of the United States. Generally, all kinds of bread except rye and other dark varieties not widely used by the household trade are wrapped. White breads commonly have been wrapped in waxed paper. For dark breads wrappers of cellophane or opaque paper with cellophane windows have been widely used, but the current shortage of cellophane is fast encouraging the use of waxed or paraffin paper.

^{2/} U. S. Food Administration Policies and Plan of Operation, Wheat Flour and Bread, Dec. 1, 1917.

In up-to-date machine bakeries the slicing and wrapping process is one continuous, automatic operation requiring practically the same attendant labor even if the slicing detail were omitted. Consequently there would be little saving in eliminating slicing in a shop equipped with the latest mechanical improvements other than the cost of power, machine upkeep, depreciation, and sharpening and replacing blades. One set of blades on a modern machine will slice a half million loaves before replacement is necessary, according to a large baker reporting to the Commission, as compared with about 10,000 loaves slicing capacity of one of the older type machines. Slicing is done by machine even in small bakeries not equipped with the newer type slicing or other mechanical improvements. In some of these smaller plants there would be a greater saving by eliminating the slicing process because of the supplemental hand labor required in wrapping.

The Commission's present investigation shows that 64.30 percent of the bakers throughout the country to whom report forms were sent sliced their entire output of bread: almost 32 percent sliced between 90 and 100 percent of their output; and the proportion which sliced less than 90 percent was negligible.

Many bakers have from one to two years supply of blades but it is doubtful if they could obtain more of such critical steel products. As a war measure, the elimination of slicing would save the baker some of his costs of labor, materials and upkeep. He might benefit further through increase in the volume of bread sold because of the inefficiency of household slicing. However, savings balanced against possible consumer inconvenience might not be sufficient to warrant the discontinuance of slicing as long as the supply of blades holds out.

Pointing out that slicing is a distinct service to the consumer which the baker desires to continue in spite of the inherent possibilities of savings, the Baking Industry War Conference, meeting in Chicago, October 20-21, 1942, resolved that "if the machinery and metal situation becomes so critical as to demand withholding of supplies -- and thus provide a war cause for elimination of slicing -- then the industry will promptly cooperate with any Government order or request."

Bakers generally reported that only very small savings could be obtained by eliminating slicing, but one baker made a careful study of possible savings through the elimination of slicing. Based upon his figures, the industry saving would be approximately \$900,000 per annum.

However, a close relationship exists between slicing and certain economies in wrapping. Some kind of wrapping for bread is essential. For sanitary reasons alone bread wrappers are justified. This is particularly true in the grocery store trade where bread is subject to much handling and sometimes to storage in spots where cleanliness is not of the highest order.

There is opportunity, however, for definite economy in the wrapping of bread. The use of fancy wrapping has been overdone in some instances due to the technological improvements of the last 20 years in paper making and color printing and to the pressure of competition for innovations. Double length full wrappers have been used, especially on long sliced loaves, but for the last year or so they have been progressively discontinued in favor of an inner wrapper somewhat shorter than the loaf plus a single full length outer wrapper. A few bakers are still employing full length double wrappers on sliced long loaves used by restaurants for sandwich making. The remainder generally are using inner wrappers and many have shortened their inner wrappers to reduce paper cost.

Inner wrappers are made of waxed paper and have three main functions: sanitation, retarding the inevitable staling process, and prevention of "cripples," a certain number of which can be expected when bread is sliced, especially in long loaves.

The Baking Industry War Conference in October recommended the discontinuance of waxed inner liners on loaves less than 13 inches in length and on longer loaves where they exceed two-thirds of the length of the loaf. This conference also recommended the discontinuance of waxed paper for double wrapping and for outserts, except for label corrections. This action was taken because paraffin, used in waxed paper, is becoming a critical war material.

Possibilities of savings in the use of waxed paper during the remainder of the war period may depend on the outcome of cooperative experiments now being conducted by the paper and baking industries to determine the possibility of using a cheaper grade of paper with a lesser paraffin content. A 36-pound paper (23 pounds of paper plus 13 pounds of paraffin) is normally used by bakers, but if a cheaper fiber paper of about 28 pounds weight (18 pounds of paper plus 10 pounds of paraffin) could be employed, the result would be a 25 percent saving in both paper and paraffin. However, the successful use of this lighter paper would probably mean the elimination of slicing and with slicing would go the inner wrapper, leaving bread to be packaged unsliced in a single outer wrapper.

Discontinuance of the use of more than two colors in printing any wrapper was also recommended by the conference "because critical manpower, metals and ink are used in printing and because two-color printing is fully adequate in this time of war." Most of the bakers interviewed by the Commission were willing to reduce the number of colors on wrappers. Three-color wrappers have been common throughout the industry and in some instances wrappers with four and five colors were found. Some bakers believed that one color against a white background is sufficient. However, if two-color printing were generally adopted the saving would be substantial and the industry could still maintain the identity of its products with reasonable "eye-appeal" to the consumer. Some bakers report stocks of wrappers printed in more than two colors sufficient to last several months.

The paper industry, is also experimenting with the problem of ink and ink coverage on wrappers. If a cheaper grade of wrapping paper is to be used changes in the quality of the inks employed may be necessary.

In its present investigation the Commission obtained statistics on the use of wrappers from representative wholesale, house-to-house, retail, and chain bakers throughout the country. From the sample of the entire country, the percentage of white bread innerwrapped by individual bakers as of March 31, 1942, varied from 100 percent down to 2 percent. The percentage of white bread innerwrapped as of September 30, 1942, ranged from a high of 100 percent down to one-twentieth of one percent. The wholesale group in all areas reported percentages of bread innerwrapped ranging from 100 percent down to 2 percent as of March 31, and 100 percent down to one-twentieth of one percent as of September 30. The percentages of the house-to-house group varied from 100 percent down to 10.9 percent as of March 31, and from 100 percent to 4 percent, as of September 30. The chain store baker group's percentage of innerwrapping ranged from 100 percent down to 2.50 percent as of March 31, and from 100 percent down to 2.34 percent as of September 30. An adequate sample was not obtained from the retail group.

For the entire sample taken from the country at large, the savings estimated as possible by means of eliminating the innerwrapping of bread varied for individual bakers from a high of \$1.00 to a low of \$.001 per 100 loaves of bread. For the wholesale group the range was from a high of \$1.00 to a low of \$.001; from \$.33 to \$.067 for the house-to-house group, and from \$.1290 to \$.0744 for the chain store bakers.

The percentage of white bread double wrapped by individual bakers was reported as follows: high, 100 percent, and low, 2.45 percent, as of March 31, 1942; and high, 100 percent, and low, 2.84 percent, as of September 30. The wholesale group reported highs of 100 percent for both periods and lows of 2.45 percent on March 31 and 2.84 percent on September 30. The house-to-house group reported a high of 100 percent and a low of 59 percent as of March 31, and 55 percent of white bread double wrapped as of September 30.

The savings per 100 loaves of bread estimated by individual bakers as possible by means of discontinuing double wrappings were: high, \$1.00, and low, \$.105. The wholesale group's high was \$1.00 and its low, \$.105, while the house-to-house group reported a saving of \$.177.

Should the situation become sufficiently critical, slicing should be eliminated, especially if by its elimination marked savings can be made in the quantity of critical paraffin and paper needed for preservation and sanitation in the wrapping of bread.

Section 7. Stale Returns

Stale returns result principally from the competitive device commonly known in the bread baking industry as consignment selling under which the wholesale baker assumes all responsibility for loss incurred in disposing of bread that remains unsold on the counters of independent retailers after a specified period of time -- usually either 24 or 48 hours.

The principal economic defenses offered for consignment selling are that it is the means by which the baker is able to satisfy to the maximum degree the consumer's taste for fresh bread and safeguard the goodwill attaching to his product by assuring that the retailer will not keep bread on his counter until it is so stale or otherwise deteriorated as to be unsatisfactory to consumers.

All branches of the industry agree that stale returns are a source of financial loss to bakers and of waste of breadstuffs because not all stales made can be disposed of for human consumption. It is also generally agreed that reduction in stale returns offers the greatest single opportunity for saving available to the industry. Yet after a year of effort to reduce stale returns through voluntary action of the industry itself, information obtained in the present inquiry indicates that percentages returned vary widely in different markets and that some wholesale bakers in highly competitive markets still were taking back excessive percentages of stales ranging up to 18 percent of bread and rolls sent out during accounting periods ending as late as November, 1942. A few bakers in highly competitive markets state that percentages of stale returns are greater now than a year ago. At the same time the ability of bakers to dispose of stales at half price for human consumption is decreasing because, with increasing employment, fewer persons are purchasing stale bread.

Two distinct viewpoints are expressed in the baking industry respecting stale returns as a competitive trade practice. The first is that taking back stales is a practice necessary to enable the small baker to survive in competition with large bakers. The second is that it is a competitive method in the use of which the local wholesale baker is at a distinct disadvantage as compared with the large baker who, by overstocking grocers for mass display purposes and taking back large percentages of stales, competitively forces all other bakers serving the market to likewise overstock and take excessive losses on stale returns. Those holding this viewpoint maintain that large bakers serving many markets have financial ability superior to that of local bakers in absorbing excessive losses from stales. This superior strength, they claim, lies in the ability of large bakers to absorb losses from stale returns incurred in highly competitive markets out of profits realized in less competitive areas, whereas the local wholesale baker must stand or fall financially on the basis of profits or losses made in his local market. It is also claimed that many local bakers have been forced into bankruptcy because of losses on stale returns competitively forced upon them by larger competitors.

The strongest proponents of retention of stale returns are large baking companies to whom so-called consignment selling and the acceptance of stale returns is useful in breaking into or increasing sales in any given market, first, as a means of inducing retailers to stock their brands of bread and, second, as a means of advertising appeal to consumers through mass displays. In further defense of the practice, numerous large bakers and some smaller ones take the position that the elimination of stale returns would injure the business of small bakers and benefit the business of large companies because grocers would prefer to stock and sell the widely advertised brands of the big companies and would even refuse to stock unadvertised or less widely advertised local brands. Proponents of elimination counter by stating that such was not the result when return of stales was prohibited during World War No. I, and urge its prohibition to eliminate waste of precious food materials and benefit the local baker by putting him on an equal and fair competitive basis with larger, financially stronger companies.

As a competitive device, the taking back of stales unquestionably is useful to wholesale bakers both in breaking into new markets and in increasing sales in markets already served. The position of proponents is well exemplified by the following quotation from a letter addressed by the president of a large baking company to the Chief Economist of the Federal Trade Commission, under date of October 2, 1942:

"My company will do a business this year of approximately twenty million dollars. I could never have gotten started in this business, from the first day I went out with one horse and wagon, were it not for the fact that it was a customary practice at that time, and always has been, to exchange bread in the grocery store. This practice permits the small baker, who does not have public demand and does not have money for advertising, to get what we might call a toehold on the counter. By taking a little chance of putting a few loaves on the counter for display purposes, he gradually builds up a business.

"If the exchange of stale bread were eliminated today, or at any time in the future, practically all of the business of the grocery stores would go to just a few very large companies who are advertising their products constantly to the consumer, because the grocer would not want to lose any more than necessary, and on those brands that were not called for he would take the greatest loss. Along this line you will find in your investigation that the percentage of stale will vary in different companies according to the amount of advertising done and according to the advertising years back of each brand that has built up a consumer demand."

By contrast, the position of numerous but by no means all smaller wholesale bakers operating in more limited territories is that the total elimination of consignment selling would benefit rather than injure the smaller wholesale baker. Local wholesale bakers, it is maintained, are able to make bread of high quality and distribute it locally at low cost provided they are freed of the competition of

large companies that often haul bread long distances at high distribution expense and force its distribution by overstocking grocers and taking large losses on stale returns.

The large baker who wrote the letter quoted above apparently sent a copy to an accountant and consultant to a large number of wholesale bakers. The consultant's reply, addressed to the baker, under date of October 8, 1942, expresses very well the viewpoint of bakers who favor total elimination of stale returns and believe that the interests of local bakers would be benefitted rather than injured by such elimination. The consultant stated in part:

"The crying need of the baking industry for years has been a more intensive, direct, and dynamic selling effort directed to consumers. This selling effort should begin with the advertising of the baker and carry straight through the sales organization, the grocer and his clerks, to the consumer. There should be no lagging pause in our effort to keep the consumer sold on bread as the cheapest, as well as the most essential, of all foods. If you agree with me as to this basic, fundamental fact, then you must see that our selling effort has been stymied, if not stopped, by the inertia of the dealer who has failed to perform a very vital part of this necessary, straight-line selling effort. He has had no such urge to try to sell consumers on bread because of his lack of investment and the threat of possible loss, as would be the case if the bread he bought each day were actually his property and the necessity were upon him to 'sell out' or take a loss.

"Now, we positively need to tie in the dealers' interest in this bread selling game. We should make them 'sell' bread instead of just 'handle' it. That's what the baking industry needs and what it must have if we are ever to rouse the consumer from her lethargy or inert interest in bread."

"I notice you express yourself as being in sympathy with the little baker and plead for a continuance of consignment selling, so as not to put him at a disadvantage or out of business. Well, that's a fine sentiment, but sentiment has little place in business or in the general scheme of life. We are, in a practical sense, living in a 'make good' world. The law of the survival of the fittest is as inevitable as the law of gravitation. This may seem a hard philosophy, but we can't escape it without severe penalty to ourselves, as well as to our industry."

"Now, back to the dealer - I would favor a form of regulation by the government such as would make him responsible for the salvage of stale, by having him put his own price on such left-overs as he may have. Let the baker code his bread by days; namely, Monday, Tuesday, Wednesday, etc., so the consumer may know herself when the bread was baked. This would make the grocer responsible to her for sending her a stale loaf if he was so daring as to try to do it. He will be very careful not to disappoint a

regular customer by sending a stale loaf. Then let him decide each day how much bread he wants from each baker, and you may depend on it that he will choose his breads from those brands in greatest demand. This makes every baker a merchant if he wants to stay in business.

"Thus would be established a fair basis of competition. Bread would be 'sold' and not just 'handled' by the grocer, and the fellow who got the most business, would be the one who DESERVED most of it. There would be no place for the chiseler, the whiner, the sympathy-seeker, the cheap cockroach baker, whose practice keeps the industry standards down, or who depends on low price and discounts for his business. He would have to run the gauntlet of the dealer's fear that his bread would not sell.

"Now, I want to point out, too, that your sympathy for the little fellow is inconsistent and paradoxical. On the one hand you plead for his right to exist and get established by putting bread in on consignment; on the other hand, you know that this very policy, as practiced by the big fellows, is putting small bakers out of business in every town in the country, by slugging the stores in small communities for weeks and months. The mortality of small bakers, due to this very practice, is nothing short of appalling, so the plea for the little fellow really becomes a camouflage for the big baker to continue the practice of consignment selling. The tears shed by the big fellows for the little fellow are really crocodile tears, after all. There is no sincerity back of it at all, and if these facts were known to the Federal Trade Commission, the plea for a continuance of the practice of taking back stale returns, would fall flat and bring suspicion on every other offer of cooperation to the government, by the big bakers.

"The whole practice of taking back stale returns is unsound from every logical standpoint. It is unsound economically and it is unsound from the standpoint of progress for our industry.

"In World War I, it was abolished and the bakers made more profits than ever before. No consumer was inconvenienced or disappointed; no dealer reported serious loss. Competitive conditions were, manifestly, better throughout the industry, and both volume and profits increased, as statistical records will show.

"No sound, practical excuse can be offered for the practice, based on logical, economic, or ethical consideration. It is continued only as an habitual abuse based on traditional or purely selfish motives. It cheats the grocer (you and I have both driven a bread truck and know how easily possible it is to make a few dollars a week extra off the grocer); it deceives and cheats the consumer; it makes for unfair competition, and finally, it cheats the baker and arrests the progress of the industry.

"I can go along with you on every other phase of your letter to Mr. England. Bread racks, two deliveries, and banishment of premiums are all minor evils and are sporadic in character. Local outbreaks of abuses incident to any of them are mostly temporary in their effect, but the stale bread evil is both universal in practice and in baneful effect."

Information developed by the Commission in this inquiry indicates that the division of opinion is largely, although not wholly, between larger companies who wish to retain stale returns as a competitive method and smaller local bakers who wish to have it eliminated. Several bakers who attended the Baking Industry War Conference in Chicago, October 20-21, 1942, state that they strongly advocated elimination, but that their viewpoint did not prevail in the conference which was sponsored by the American Bakers Association. These and other opponents of consignment selling are outspoken in the opinion that the Conference recommendations were dominated by big company viewpoints, as a consequence of which the Conference adopted the following report of its resolutions committee on the subject of consignment selling:

"The committee has taken note of the discussion on a proposal for the elimination of stale returns held here yesterday. The committee had established the policy of bringing no report to the conference on any subject until first hearing from the branch meetings.

"Reports of the branch meetings on this subject clearly indicate that any proposal to recommend elimination of stale returns could not pass.

"Therefore, the committee brings in no recommendation on this subject."

Although thus divided in its opinion, the trade, as already stated, generally agrees that the elimination of losses on stale returns offers the largest single opportunity for wartime saving and elimination of waste in the baking industry. Under these circumstances it is obvious that the trade is powerless to eliminate stale returns by voluntary action as a wartime economy measure, notwithstanding the obvious waste involved in competitively hauling quantities of bread, sometimes over long distances, delivering it to stores and subsequently picking it up again and hauling it back to the bakery as stales, in the disposal of which further office and selling expense is incurred.

The argument that stale returns are partially or even wholly disposed of for human consumption either through day old stores or by sale or gift to charitable or other institutions loses much of its merit when it is realized that as a competitive device, the acceptance of stale returns requires such pyramiding of expense which adds to the distribution cost both of bread distributed fresh and bread distributed to institutions and charity. It may well be that, as suggested by

some bakers, the industry could more economically produce some fresh bread for institutional use if necessary and sell it at a reduced price instead of piling added distribution costs upon its production cost before it is finally sold to institutions as stale.

Furthermore, the financial reports returned to the Commission by many bakers show stale losses greater than the profits of the companies even in recent accounting periods, notwithstanding reductions in stale returns voluntarily made by the industry within the past year.

The argument that bread is a perishable commodity that requires the acceptance of stale returns to assure its reaching the consumer in good condition in order that the baker's goodwill may not suffer is based on the assumption that the grocer either will not or cannot assume the full responsibility of merchandising bread. Proponents of elimination of stale returns point to other products of equal or greater perishability which the grocer buys outright and on which he assumes the full responsibility of their disposition.

Under reasonably good handling conditions, bread becomes progressively stale for a period of at least 4 days to a week without deterioration in food value. Under present conditions of consignment selling, bread is often from 12 hours to 36 hours old before it is delivered to grocers and from 48 to 72 hours old before it is delivered to consumers. With reasonable care in his buying, it is believed that the retailer could so regulate his purchases as to keep within these limits. Fresh returns unavoidably made by bakers would find a market as stales for human consumption just as both they and stale returns are now marketed. Public health would not be endangered by the consumption of more moderately stale bread held over by grocers.

Wastage of stales not used for human food. - Report forms returned to the Commission by 347 wholesale plants and 27 house-to-house baking plants covering operations during two accounting periods including, respectively, March 31 and September 30, 1942 showed total pounds of bread and roll sold, total stales returned and total stales not disposed of for human consumption during their accounting periods which including March 31 and September 30, 1942, as shown below.

Type of Operation	March 31 Period		September 30 Period	
	Pounds	Percent	Pounds	Percent
Wholesale - Total sold.....	339,864,239	100.00	376,357,154	100.00
Total stales returned.....	19,511,855	5.74	18,288,596	4.86
Total stales not used for				
human food.....	6,921,699	2.04	8,704,401	2.31
House-to-House - Total sold.....	27,862,513	100.00	29,096,771	100.00
Total stales returned.....	1,490,081	5.35	1,507,360	5.18
Total stales not used for				
human food.....	143,041	0.51	192,811	.66
Total Wholesale and House-to-House				
Total sold.....	367,726,752	100.00	405,453,925	100.00
Total stales returned.....	21,001,936	5.71	19,795,956	4.88
Total stales not used for				
human food.....	7,064,740	1.92	8,897,212	2.19

Both wholesale and house-to-house bakers sold more bread and rolls in September than in March. Both also showed reduction in the percentages of bread disposed of as stales. Notwithstanding these reductions, however, both showed increased percentages disposed of for uses other than human food. This showing is in accordance with statements made by many bakers that although they have reduced their percentages of stales, the market for stales for human food becomes narrower as unemployment decreases.

In considering the showings of the tabulation it is to be realized that wholesale and house-to-house bakers make stales in somewhat different ways. Bread may become stale in the hands of wholesalers as the result of bakery overruns resulting from inability to fit production to fluctuations in daily demand. The bulk of wholesale bakery stales, however, results from taking back bread in connection with consignment selling. House-to-house bakers face much the same difficulty in fitting production to daily demand. Their stales, however, result mainly from the fact that drivers must carry some excess stock over sales daily in order that a reasonably full line may be offered to the last customers on routes.

Average percentages of stales to total sendout did not differ greatly as between the two types of bakers in either of the periods. House-to-house bakers, however, showed much greater ability to dispose of their stales for human food and therefore without outright waste of foodstuffs. For the house-to-house group only about 10 or 12 percent of stales were not sold for human food whereas considerably more than a third of those made by the wholesale group were not so used and may therefore be considered as wasted.

On the assumption that the percentages not used for human consumption are typical, a rough estimate of the actual wastage of foodstuffs involved may be made based on a conservative estimate of 12,015,000,000 pounds as the production of bread and yeast-raised products in 1942. This estimated total is based on a 15% increase over the quantities reported by the Bureau of the Census for 1939 for wholesale and retail bakers. Using the percentage of 2.31 for wholesalers bakers in September, 1942, and an estimated total of 10,337,000,000 pounds of bread and yeast-raised bread products made by wholesale bakers and combined wholesale and retail bakers, an annual quantity of 238,784,000 pounds of stale bread was produced by this group which was not used for human consumption. A similar estimate based on 0.66 percent and an estimated production of 1,678,000,000 pounds for retail bakers would indicate that 11,075,000 pounds of stales produced by house-to-house bakers were wasted so far as human consumption is concerned. Based on these estimates, the total quantity wasted for the industry would roughly be 250,000,000 pounds per annum which, based upon the September, 1942, cost of baking and wrapping, would aggregate an industry loss of \$11,850,000.

This quantity of bread would furnish a ration of 1/3 pound to each of the country's total population for about 5-1/3 days or a similar ration for a full year to 2,055,000 persons.

Since some bread must necessarily become contaminated or so soiled in the process of manufacture and distribution as to be unfit for human food, it is impossible to wholly eliminate disposal of stales for uses other than human food. Every effort, however, should be made to reduce such wastage to a minimum, as well as to reduce the quantity made largely through consignment selling which ultimately is sold for human food at about half price, thereby not returning to the baker its cost of production and distribution.

Conclusion. - For reasons reviewed above, the Commission strongly recommends that consignment selling and the return of stale bread be eliminated in the wholesale baking trade by government order for the duration of the war.

The industry urges that to make such an order effective would require that regulations be drawn to prevent evasion by both bakers and retailers, either directly or by subterfuge. The order would necessarily have to be so designed as to provide severe penalties, possibly by both fine and imprisonment, for both baker and retailer. It would have to be so drawn as to place the responsibility squarely upon the retailer to see that bread delivered was in good condition, and to prohibit returns altogether, because to permit any returns, even of damaged loaves, opens the way to evasion. Experience during World War No. I was such as to indicate that subterfuges to be guarded against would include repurchase of bread from retailers by any individual baker or baking company or its officers, employees or agents, including subsidiaries, affiliated companies or individuals acting for or under subsidy or other arrangement by the wholesale baker, with penalties running against all concerned. It is believed that such an order would be so generally accepted by the trade as not to impose an impossible policing problem.

Section 8. Savings Through Standardization

Incidence of standardization. - In taking steps to attain economies through standardization and reduction in number of kinds, weights, dimensions, and formulas under which bread and rolls are baked, two important facts are to be taken into consideration. The first is that standardization will affect the businesses and operations of different types of bakers in differing degrees, and the second is that an important collateral effect of standardization will be reduction in competition between different sections of the industry which will favor further concentration of production and control of commercial bread baking by large companies.

Growth of large wholesale baking companies has been based largely on the production and distribution in volume of a few kinds of standardized products, sometimes with only one basic formula for each kind of bread and rolls (white, whole wheat, rye, etc.) and with each kind produced in a small number of styles, weights, shapes, and dimensions of loaves and rolls. Such production permits maximum use of machine processes to produce bread at minimum cost per unit.

Smaller wholesale bakers pursue much the same policy with respect to volume items and, in addition, often bake specialties that sell in smaller volume, often at higher prices per pound or other unit, but also often are more costly to produce because special processes and handwork are necessary. Thus, the smaller wholesale baker tends to become a baker of longer lines of less closely standardized products, especially if he caters to restaurants and other eating places that feature breads and rolls having distinguishing characteristics. Serving this trade often means the baking of many small batches of dough made up by hand processes in many sizes, shapes, flavors, and other characteristics.

The house-to-house and the strictly retail baker likewise tend to become specialty bakers to their trade in a somewhat similar way. Local bake shops which, because of small volume, cannot advantageously afford extensive investment in machinery, often find it cheaper to purchase their requirements of standardized products from wholesale bakers and confine their largely hand operations to the production of specialties selling at sufficiently high prices to cover their cost of producing on a smaller scale by hand processes.

Obviously, the possibilities of standardization and elimination of products are greatest for the specialty baker who fills in the variety of products not made by the volume wholesaler, but does so by the expenditure of larger amounts of hand labor per unit of production. But to standardize the products of such concerns down to the same level as their big wholesale competitors often would require that they compete on a hand labor basis with the mechanized production of the big companies. To the extent that they were unable to compete on a cost and price basis in the production and sale of standardized products, the small baker would be forced out, leaving the entire market to the mechanized wholesale companies. It seems obvious that the monopolistic implications and tendencies of strict standardization should be considered in determining the nature and extent of steps to be taken in standardizing production and eliminating bread and roll specialties.

Another point to be considered is whether manpower saved by standardization in the baking industry may not be lost because restaurants and other eating places employ bakers to produce, at greater expenditure of man hours, the specialties which they wish to feature on their menus. This tendency, of course, might be guarded against by prohibiting the baking of eliminated formulas, styles, etc. of bread and rolls in eating places or bakeries operated in connection therewith.

Reduction in kinds of bread. - In response to a question as to the possibility of making savings by reducing the number of "kinds" (white, whole wheat, cracked wheat, rye, raisin, etc.) of bread baked, practically one third of the wholesale bakers interviewed by representatives of the Commission stated that they have eliminated one or more kinds, within the past year and practically half indicated that they have made or can make no reductions.

Some of the reductions made were eliminations of kinds of bread which sold only in small volume with excessive returns of stales. Others were made because particular materials, such as raisins, dates, seeds, or other ingredients, either were not available, or were available only at such excessive cost as to cause the baker to eliminate the particular "kind" of bread. A considerable number indicated that the eliminations made had reduced their lines to one variety of each kind. Others were still making two white breads or two or more rye breads, but thought that their lines were down to the minimum where they could not make further reductions in kinds without loss of business. This last opinion also appeared to be held by many of those who had made no reduction.

The number who were seriously considering further reductions as an economy measure was negligible. Less than 1 in 10 of those interviewed made answers indicating that further economies might be made through additional eliminations. Of these about a third indicated that further eliminations would be desirable, another third indicated that further eliminations would result in economies gained only at the expense of loss of sales and the balance indicated still further the competitive aspect of the matter by stating that they could not afford to make further elimination unless their competitors also did so.

Companies that have made no reductions include some of both the type of wholesale bakery that seeks large volume on a few standardized varieties of bread, and the type that makes numerous specialties which, in some cases, constituted the bulk of their volume. Eliminations made ranged from 1 to 5 kinds (such as raisin, rye, pumpernickel, soybean, cracked wheat, cheese, poppy seed, Swedish rye, etc.). In some instances "kind" was interpreted to mean sizes and shapes of loaf, in which case eliminations made ran far higher ranging up to 15 or more.

Much appears to have been done. Possibilities that still remain appear to be considerable, especially for variety and special bread bakers. The latter group, however, point out that further eliminations of items such as home loaf, French bread, pumpernickel, Swedish and other special ryes, fruited and seeded breads and the like would result in sharp decrease in the volume of their businesses.

Number of "varieties" of bread and rolls baked. - Bakers were requested to report, among other things, the weight of each loaf of white, rye, whole wheat and raisin bread baked (a) for home use and (b) for restaurant use. A similar question was asked respecting varieties of rolls. Under these questions, each size of plain and enriched loaf becomes a separate "variety" of bread. About 4 out of 5 of the plants that returned schedules in time for tabulation for this re-

port furnished this information. The showings as to number of varieties reported for each of the principal kinds of home loaves are shown below:

Number of plants baking the designated
varieties and kind of home bread

Varieties baked	White	Rye	Whole Wheat	Raisin
1	66	269	188	203
2	90	67	127	15
3	97	22	48	4
4	67	6	30	2
5	45	7	11	-
Over 5	65	7	5	-
Total plants	430	378	409	224

The showing is that a considerable number of plants reporting made only 1 or 2 varieties. These often were large companies that specialize in the production in volume of a few kinds and types of bread. At the other extreme are specialty bakers often making five or more varieties of some of the different kinds. For raisin bread, however, none of the companies made more than four varieties. The maximum diversity in varieties made is shown for white bread of which 65 plants made more than five varieties.

The showing for restaurant breads is as follows:

Number of plants baking the designated
varieties and kind of restaurant bread

Varieties baked	White	Rye	Whole Wheat	Raisin
1	70	131	108	92
2	74	82	79	31
3	98	50	74	13
4	65	21	25	3
5	31	7	13	-
Over 5	46	22	19	2
Total plants	384	313	318	141

Here again there is a showing of considerable diversity with considerable numbers of the plants baking more than 5 varieties of all except raisin breads.

For rolls, the general practice is to bake a far greater variety made from each kind of dough (white, rye, whole wheat, etc.) than for bread, as is shown in the following tabulation:

Number of kinds made	Number of plants making
1 to 5	186
6 to 10	139
11 to 15	47
16 to 20	15
21 to 25	7
26 to 30	6
Over 30	6
Total plants	406

Many bakers interviewed by the Commission's examiners indicated that they could make savings in operating costs by reducing the number of kinds and styles (varieties) of bread and rolls baked. Those who were baking only 1 or two varieties of each kind of bread, and less than 5 varieties of rolls generally did not feel that they could effect much saving through eliminations.

Savings by reducing "varieties". - Two questions in the report form sent to bakers requested estimates of dollar savings based on the accounting period including September 30, 1942, which would result: (1) if white, rye, whole wheat and raisin type breads baked were limited to one variety of each kind of bread and (2) if the number of varieties of rolls (exclusive of sweet rolls) were reduced to a minimum number to be specified by the baker. Separate estimates of dollar savings were requested for savings (1) on bread for home consumption, (2) on restaurant breads and (3) on rolls.

A total of 104 bakeries prepared estimates of savings that would be effected in their operations if they reduced their varieties in the manner outlined. In most instances the number of rolls (exclusive of sweet rolls) to which they felt they could reduce ranged from 3 to 5. A few felt that they could reduce to 1 or 2, while a few others felt that they could not well reduce to less than from 9 to 12, and one gave 16 as the minimum number to which he could reduce. A subsidiary of a large company specializing in the manufacture of restaurant rolls, reported making 73 varieties of rolls. The parent company stated that, on an industry basis, rolls might be reduced to two varieties and sizes for home use and five for restaurant use.

The 104 bakeries reported possible savings in cost based on their accounting period including September 30, 1942, distributed as follows:

Kind of product	Saving
Home bread	\$28,274
Restaurant bread	6,739
Rolls	12,498
Total saving	\$47,511

The 104 plants reporting these possible savings by reducing varieties produced a total of 117,316,938 pounds of bread and rolls during the period and had gross sales of \$8,896,195. The savings reported when spread over this volume of business would amount to 4.05 cents per hundred pounds of bread and rolls produced, or approximately .04 cent per pound. Based on gross sales, the saving would amount to about .53 cent per dollar of sales.

Savings of this order, of course, could be made only by companies at present making more than one variety of each kind of bread or than the minimum of 3 to 5 kinds of rolls. Such reduction in varieties would mean a high degree of standardization in home bread and rolls on which commodities the reports indicated the bulk of the savings could be made. The bulk of eliminations would fall on the specialty baker who often is the smaller wholesale baker to whom fancy or special breads and rolls is an important part of total business done.

Since the baking of many varieties is a distinctly competitive practice in the industry, there would be great reluctance in the trade to reduce so sharply unless by government order affecting all bakers alike.

Sharp reduction in the number of varieties of bread and rolls would not necessarily mean standardization to a single victory loaf formula, provided bakers were permitted to choose the types and sizes they would produce. This choice might be subject to restrictions as to maximum percentages of critical materials that may be used in any formula. In this way, such economies as are possible from limiting varieties made by any one baker would be gained and still provide a selection of breads to the housewife. Such specialization by particular bakers might also offer opportunity for further savings in rubber, gasoline and labor by arrangements under which two or more bakers making breads and rolls of differing characteristics might join in delivering these products with the same trucks or through a single delivery agency.

Section 9. Sizes and Weights of Loaves of Bread

The number of different weights of loaf bread of the same kind varies in the different markets and even with different bakers in the same market. As stated in the Commission's report prepared for the Office of Price Administration on the bread baking industry, "some markets are spoken of as 'one-size,' 'two-size' or 'three-size' markets depending upon the number of weights in which bread is predominately sold." In many markets numerous different weights are baked, notwithstanding the efforts of some bakers to standardize and reduce the number of weights baked for any particular kind of bread. For instance, in the Boston market the best selling weights baked by various bakers were reported to be the 20-oz. loaf, which seemed to predominate, and the 13-oz., 18-oz., 19-oz. and 24-oz. weights. According to the report, 7 bakeries in the Baltimore market "reported 9 best selling breads made in 19 different weights ranging from 13 ounces to 24 ounces per loaf, baked weight."

Similar variations in the baked weight of loaves reported as best sellers were found to exist in other markets. The possible evils of permitting so many different weights of loaf bread have been recognized, and some States have passed laws prescribing specific weights and requiring labeling to show exact weight.

State Laws Prescribing Weights and Sizes of Loaf Bread. - In the interim report, (November 16, 1942) to the Director of Economic Stabilization, the Commission pointed out that any attempt to fix standards for weights of loaf bread may conflict with state laws: however, all States having laws regulating the weights of bread permit the manufacture and sale of loaves weighing 1 pound, $1\frac{1}{2}$ pounds and 2 pounds, and many of them also specifically permit loaves weighing "multiples of one pound." It may therefore be assumed that a Federal Order fixing the weights of loaves of white bread at one, one and one-half and two pounds would not authorize any size prohibited by the laws of any State. The following tabulation lists States having laws relating to weights of loaf bread and the standard weights for each State:

State	Permissible Weights in Pounds					
	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	Multiples of 1 lb.
Arizona.....			X		X	X
California.....			X		X	X
Connecticut.....			X		X	X
District of Columbia.....	X		X		X	X
Illinois.....		X	X	X	X	X
Indiana.....		X	X	X	X	X
Iowa.....		X	X	X	X	X
Michigan.....		X	X	X	X	X
Minnesota (none)						
St. Paul.....			X		X	X
Montana.....			X		X	X
Nebraska.....	X		X		X	X
North Dakota.....			X		X	X
Ohio (none)						
Cleveland.....			X		X	X
Youngstown.....			X		X	
Oregon.....			X		X	X
South Dakota.....			X		X	X
Texas.....			X		X	X
Washington.....			X		X	X
Wisconsin.....			X		X	X

The figures in this tabulation for all of the States and municipalities except District of Columbia, Illinois, Michigan and Nebraska were taken from Bakers Weekly, November 5, 1938. The laws of the District of Columbia, Illinois, Michigan and Nebraska have been consulted, and it is believed they are typical of State laws regulating weights and sizes of loaves.

The laws of both Illinois and the District of Columbia require a label to be attached to each loaf of bread or wrapper showing the weight thereof in pounds or fractions.

Other States have laws regulating the baking industry containing provisions similar to those of the District of Columbia and Illinois varying somewhat as to the specific weights permitted.

Use of Varying Weights and Sizes in an Unfair and Deceptive Manner. - Instances have come to the attention of the Commission where the practices of varying the sizes and weights of loaves of bread have been used to obtain competitive advantages by some of the large whole-sale bakers in highly competitive markets. Two of such practices coming to the attention of the Commission were, first, changing the unit price of loaves of the same size in highly competitive areas without making a corresponding change in the price in areas where competition was not so keen, and second, changing the size or the weight of the loaf in certain markets without changing the unit price. Where such practices have involved interstate commerce, investigations have been made and such corrective action has been taken as was warranted by the facts.

Bakers manufacturing and distributing bread in the District of Columbia also sell bread in nearby Virginia and Maryland. There is a market in Virginia points near Washington, D. C., for 12-oz. loaf bread, and a market in nearby Maryland for a 20-oz. loaf of bread. An application for complaint (File No. 1-16415) was filed with the Federal Trade Commission involving, among other things, the alleged violation of the baking laws by certain District of Columbia bakers who manufactured white bread in 12-oz. loaves and 20-oz. loaves. The sale of both these sizes in Washington, D. C., was prohibited by law. Investigation developed facts indicating that neither the 12-oz. loaf nor the 20-oz. loaf was offered for sale in the District of Columbia, but were manufactured in the District for sale, and were sold, in nearby points in Maryland and Virginia, consequently the application was closed without prejudice.

The Commission has had a number of occasions to consider alleged price discriminations in the sale of bread in interstate commerce. Some of the cases have grown out of the practice of cutting the price of bread by increasing the weight of the loaf in certain localities without making a corresponding increase in price. Other cases have grown out of the practice of cutting the price of the same weight loaf to customers in certain localities, without making corresponding price cuts to other customers, under the claim of meeting local competition.

In Docket No. 3740 the respondent, Metz Bros. Baking Company, of Sioux City, Iowa, was charged with discrimination in the wholesale price of bread to customers in certain markets as compared with the price of bread of the same quality baked in the same plant to customers in other markets. This was alleged to have violated the Robinson-Patman Act. The respondent operated bakeries in Sioux City, Iowa, and in Sioux Falls, South Dakota, and sold 24-oz. loaves of

white bread to customers located in South Dakota and Minnesota at the same price at which respondent sold 20-oz. loaves to customers located in Iowa for the alleged purpose of eliminating competition in the Minnesota and South Dakota markets. The Iowa State laws permitted bread to be manufactured and sold in 20-oz. loaves, whereas the laws of both South Dakota and Minnesota prohibited the sale and distribution of 20-oz. loaves. The law in Iowa permitted "3/4 lb., 1 lb., 1 1/4 lbs., 1 1/2 lbs., and multiples of 1 lb."; the Minnesota law provided that bread may be sold and distributed weighing "1 lb., 1 1/2 lbs., double, triple, quadruple, 4 1/4 lbs., quintuple, sextuple, and in no other way." The South Dakota law provides for the manufacture of one pound, one and a half pounds, or "any other weight which is a multiple of one-half pound and no other way."

The investigation of the complaint showed that the proposed respondent's wholesale price for the 20-oz. loaf in Iowa was 8¢ per loaf, while its price for the 24-oz. loaf was also 8¢ in Minnesota and South Dakota. The bread sold in both the Iowa market and the Minnesota market was of the same quality and baked in the same plant at Sioux City, Iowa. It should be noted, furthermore, that the 20-oz. loaf which was sold for 8¢ in the vicinity of Sioux City, Iowa, involved only short hauls while the heavier 24-oz. loaf, which was sold in the Minnesota market also for 8¢, involved a much longer haul.

One of the applicants in Docket No. 3740 furnished information from which he computed the difference in receipts from 100 pounds of dough by selling a 24-oz. loaf at 8¢ and a 20-oz. loaf at the same price. The difference was computed to be approximately \$1.00 per 100 pounds of dough not including the difference in the cost of hauling. The Commission found that the above prices (8¢ per 24-oz. loaf to customers in Minnesota and 8¢ for a 20-oz. loaf to customers in Iowa for bread of the same quality from the same bakery) violated the Robinson-Patman Act and issued an order on December 28, 1938, requiring the respondent to discontinue the practice.

There is considerable evidence that the practice of increasing the weight of the loaf without increasing the price has been used also to obtain competitive advantage by large wholesale bakers in highly competitive markets where interstate commerce was not involved. It appears that in the Norfolk-Newport News market large wholesale bakers with plants located in Norfolk are now transporting 20-oz. loaves of bread from their plants in Norfolk to Newport News for sale to dealers at the same price at which a 16-oz. loaf is sold in Norfolk.

In most trade areas there is keen competition in the baking industry, although there is reason to believe that here and there wholesale bread prices have been established and maintained by collective agreement among the bakers. Perhaps the keenest competition is to be formed between the wholesale bakers and the grocery chains, who bake their own product. In general, the retail price charged by the grocery chain to the consumer is equivalent to the wholesale price for the same weight loaf charged by the wholesale bakers to his retailer customer. Since the independent retailer usually realizes a profit of about two cents a loaf, the bread sold to him by the

wholesale baker ordinarily reaches the consumer at that much higher price than chain grocery bread.

It will be seen that the chain grocer is a very important factor in competition in the bread industry. An insufficient number of reports from chain stores were received in time for inclusion in this report. These reports included only the costs to bake and wrap and total costs would be difficult of ascertainment, at least insofar as delivery and selling costs and general and overhead costs are concerned, since bread is handled as one of the very many items sold at each chain store.

Limiting sizes and weight used as a means of fixing prices. - Attempts by members of the industry to combine to limit sizes and regulate weights of loaves of bread as a means of controlling prices, where interstate Commerce was involved, have resulted in prosecution under the Anti-trust laws.

Following investigation of conditions existing in the baking industry in the Philadelphia market, the Department of Justice secured indictments on January 9, 1941, in the United States District Court for the Eastern District of Pennsylvania, against eleven corporations and thirty-three individuals alleging conspiracy in restraint of trade in violation of the Sherman Anti-trust Act through agreements to limit and regulate the sizes and weights of loaves of bread and to fix and maintain uniform prices.

There were two indictments alleging and reciting specific instances of "an unlawful combination and conspiracy arbitrarily to limit the sizes and regulate the weight of loaves of bread sold and offered for sale and to fix, determine, establish and maintain uniform and non-competitive prices for the sale of bread in said interstate trade and commerce in all or substantial portions of the States of Maryland, Delaware, New Jersey and the Commonwealth of Pennsylvania."

The defendants entered pleas of Nolo Contendere and paid fines aggregating \$85,000.

Variations in Sizes of Pans. - Attempts to regulate and limit the weights of loaves of bread which may be sold may involve some difficulty with respect to the sizes of pans on hand and used by bakers which have manufactured many different weights of loaves. A wide variety of sizes and shapes of pans are used in baking the different weights and textures of loaves made from a given formula, each baker using the sizes and shapes regarded as most advantageous from a competitive standpoint.

In its report to the Office of Price Administration the Commission called attention to the variety of sizes of pans in which the best selling loaves of household bread were baked in the different markets and submitted the following tabular statement showing typical variations in certain markets.

Dimension of pans in which best selling loaves of similar weight were baked					
City	11½ to 13 oz. (Inches)	16 to 16½ oz. (Inches)	17 to 18½ oz. (Inches)	20 to 21 oz. (Inches)	24 oz. (Inches)
Kansas City, Mo.	10 x 4½	9½ x 5½ 10 x 4½ 10 x 4-5/8 10-5/8 x 5-3/8	9 x 5½ 9½ x 5½ 10 x - 10 x 4½ 10 x 4-5/8 11½ x 4½ 12 x - 9½ x 5½	10 x 5 10½ x - 11-5/8 x 4-5/8 12 x 4½ 15 x 4	14 x 4
Omaha, Nebr.		9½ x 6 10-5/8 x 6		10½ x 5½ 11½ x 4½ 12 x - 12-1/8 x 4-3/4 10½ x 5½ 11-5/16 x 4-3/8 12-1/8 x 4-3/4 14 x 4	13-3/4 x 5-1/16
Davenport, Iowa		9½ x 5 10½ x 4-5/8			
Philadelphia, Pa.	9 x 4 10 x 4 11 x 4½		9½ x 3½ 9½ x 4 10 x 4 10½ x 4½ 11½ x 4 12 x 4-7/8 14 x 4 8½ x 6-7/8		
Boston, Mass.				9 x 4-7/8 9 x 5 11 x 4½ 11½ x 4-3/4 12 x - 9 x 4-3/4 11 x 4-3/4 12 x 4½ 12 x 4-3/4	
Providence, R. I.			7-3/4 x 6-3/4 11¼ x 4½		
Atlanta, Ga.		11-3/4 x 4	11½ x 3-3/4 11-3/4 x 4		

Some of the State laws have prescribed not only the weights of loaves which may be sold, but also the size of pan which must be used in baking each such loaf.

The laws of Michigan prescribe the following weights of loaves and maximum dimensions of pan in which each loaf must be baked: (Northwestern Miller July 23, 1941).

Weight in ounces	Length	Width at Top (inches)
12	8	4
16	10	4 1/2
20	12 1/4	4 1/2
24	15	4 3/4
32	16	4 3/4

Oregon has a law authorizing the pound, pound and one-half, two pound and three pound loaves of bread prescribing that the one-pound loaf shall be baked in a pan 9 x 4-1/2", the one and one-half loaves in pans 12½ x 4½", the two pound loaf in a pan 16 x 4 x 4" and the three pound loaf in a pan 20 x 4½ x 4½". It also provides for a twin loaf weighing one and one-half pounds to be baked in a pan 7 x 8", and a one and a half pound Pullman loaf in a pan 13 x 4 x 4". (Bakers Weekly, Nov. 3, 1938)

The State of Washington authorizes the one pound loaf baked in 9 x 4-1/2" pan and the one and one-half loaf baked in 12½ x 4½" pan. It also authorizes Pullman Bread in one pound loaf baked in a pan 9" in length and containing 144 cu. in.; the one and one-half pound loaf baked in a pan 13" in length and containing 208 cu. in.; a two pound loaf baked in a pan 16" in length and containing 256 cu. in.; and a three pound loaf baked in a pan 20" in length containing 405 cu. in. (Bakers Weekly, Nov. 5, 1938.)

From the above tabular statement and references to State laws it will be noted that a pound loaf of bread may be baked in pans ranging from 9 to 11½ inches in length and from 4 to 6 inches in width. Loaves weighing one and a quarter pounds may be baked in pans ranging from 9 to 15 inches in length and 4 to 5½ inches in width. In the 20 to 21 oz. loaf group were two sandwich-type loaves respectively 14 and 15 inches in length, both baked in pans 4 inches wide. A loaf weighing one and a half pounds (24 ounces) may be baked in pans of 12½ inches in length as required by the laws of Oregon and Washington or 15 inches as prescribed by the laws of Michigan.

With respect to the dimensions of pans in which loaves of the same weight may be baked it should be noted that one-pound loaves were baked in pans:

$9\frac{1}{2}$ x $5\frac{1}{4}$ ")	
10 x $4\frac{1}{2}$ ")	
10 x $4-5/8$ ")	In Kansas City, Mo.
$10-5/8$ x $5-5/8$ ")	
$9\frac{1}{2}$ x 6")	
$10-5/8$ x 6")	In Omaha, Nebr.
$9\frac{1}{2}$ x 5")	
$10\frac{1}{2}$ x $4-5/8$ ")	In Davenport, Iowa
$11-3/4$ x 4")	In Atlanta
10 x $4\frac{1}{2}$ ")	(by State Law in Michigan)
9 x $4\frac{1}{2}$ ")	(by State Law in Oregon and Washington)

Other loaves of equal weight were shown to have been baked in still larger variety of sizes of pans. It was shown by the above tabular statement that the 20 to 21 oz. loaf was baked in 18 different dimensions of pans ranging from 9 x $4-3/4$ inches to 15 x 4 inches.

Standardization of weights of loaves would have little effect on costs. It would however assure the consumer greater ability to purchase like quantities of bread by weight under different brands in territories where weights were not fixed by law, and where, therefore, bakers make what is equivalent to changes in price of less than a cent per loaf by varying loaf weights. The latter, therefore would be the principal reason for standardizing loaf weights under price ceilings. If such action is considered desirable it would appear that standard loaf weights of 1 pound, $1\frac{1}{2}$ pound and multiples thereof generally could be baked in pans at present in use.

Section 10. Percentages of Labor Turnover and Other Labor Problems

Director James F. Byrnes requested that the Commission obtain the facts so as to disclose "the possibility of lowering profit margins and the payment of workers and officials." Bakers in all parts of the country were requested to furnish information with respect to possible savings in labor. The labor situations and difficulties which the baking industry managers called attention to may be grouped into five classes, as follows:

(1) Those arising out of attitudes of labor that are or have been more or less general, such as, (a) policies looking to the preservation of jobs and "make-work" policies, which express themselves in resistance to the consolidation of unprofitable delivery routes or in limitation of output, and (b) the practice of many employees, especially recent acquisitions, in frequent failure to report for work and in other ways;

(2) Those arising out of short working week coupled with the requirement on the part of the employer to pay at the rate of time-and-one-half for overtime work, which it is claimed offers a powerful inducement to the employees to slow the pace during regular working hours;

(3) Problems arising out of labor contracts which (a) hamper the best utilization of available force, especially when the plant is short-handed, (b) which hamper discipline, or (c) which result in jurisdictional strikes or threat of strikes;

(4) Those arising out of interpretation of routemen's territorial rights, resulting in some instances in what are claimed to have been unearned commissions to routemen for bread delivered under contract with the Government to military cantonments; and

(5) Those arising out of a greatly increased rate of labor turnover induced, in those communities in which there have been rapidly expanding war-work industries, by the relatively high wage rates those industries have been able to offer in order to expand their labor forces, and from the drawing of this labor supply away from ordinary peace-time industries.

Of these five classes of labor problems, the greatly intensified rate of labor turnover is the most important, not only because of its immediate effect but because the situation created by it furnishes a special and abnormal opportunity for developing situations of the first three classes.

In many communities, plants engaged in the production of products for war use and for war supplies or materials have been expanded and require greatly augmented labor forces to man them. During that period in which they were building up these labor forces, the labor situation in the already established peace-time industries, including the baking industry, has been greatly disturbed. The only means available to the war-work industries for inducing workmen to come to them from other employment was to offer and pay wage rates high enough to constitute an adequate inducement to change employment.

It was reported by baking company managers in some of the communities, that war-workers would show their friends and acquaintances earnings from \$80 to \$110 per week. Naturally these friends and acquaintances who, in the baking industry, were receiving \$40 per week or less, sought the more remunerative employment.

The result was progressive, affecting the labor situation in all industries within the area of influence of the war-work industries. Even though not all of the seekers obtained such highly remunerative employment in the war-work industries directly, some of them did so. Their success in this respect created vacancies in the forces that they quit. The employers of these forces sought to fill these vacancies. Eventually some of the baking companies sought to replenish their denuded forces by hiring women for certain classes of

work formerly performed traditionally by men; but to the extent that these vacancies were not filled by hiring women who were not previously employed in industry or business, they could be filled only by hiring workers away from other employment in the same industry or other industries; and this could be accomplished only by offering higher wage rates than the new employees had been obtaining previously. The success of these employers in obtaining replacements in this manner created vacancies in other employers' labor forces, and the latter employers found it necessary in turn to draw workmen away from the labor forces of still other employers -- at higher wage rates. The result has been a spiraling increase in the migration of labor, not only to war-work industries from peace-time industries, essential as well as non-essential, but from peace-time industry to peace-time industry -- at ever increasing wage rates and accompanied by increasing wage costs of product not only through such increase in wage rates but through increased proportion of overtime work compensated at time-and-one-half. Freezing employees' wage rates in the positions they occupy at the moment has not prevented them from obtaining higher wage rates by migrating, and is not preventing their former employers from paying higher wage rates in order to replace them with other migrating workers.

The great increase in labor turnover and of the effects thereof was reported by baking company managers particularly in war-work communities from Seattle, Washington to Portland, Maine, from Boston, Massachusetts to Tampa and Lakeland, Florida, and from Detroit, Chicago and Minneapolis to New Orleans. Some of them furnished comparative statistics or measures of labor turnover.

In New Orleans, one small baking company replaced 36 employees during the quarter ended September 30, 1942, as compared with 15 employees during the quarter ended December 31, 1941, in order to maintain a force of 60 employees. Another replaced 73 employees during the more recent quarter as compared with 28 employees during the quarter ended March 31, 1942, in order to maintain a force of 106 employees and as compared with 18 replacements in order to maintain a force of 80 employees during the quarter ended March 31, 1941. A third company, which did not have data for an earlier period, replaced 22 employees during 2 weeks ended early in November, 1942, or at the rate of 143 replacements per quarter, in order to maintain a force of 135 employees.

In Jacksonville, Florida, one baking company, with a force of 160 employees, replaced 36 of these employees during October, 1942, as compared with 15 replacements during the preceding October, or at the rate of 108 replacements as compared with 45 replacements per quarter, in order to maintain this force. Another Jacksonville baker, with a force of 225 employees, sustained 71 separations during a 4-week period in October, 1942, or at the rate of nearly 103 percent per quarter, while a third reported a turnover of approximately 100 percent during the quarter ended September 30, 1942; neither company had

data available for a period in 1941. In Atlanta, Georgia, one baking company replaced 106 employees in a force of 132 during the quarter ended September 30, 1942, as compared with 39 replacements in a force of 130 employees during a quarter in 1941, only 5 or 6 losses in the later period being caused by the Draft. Another Atlanta baking company with a force of 258 employees, replaced 29 employees during a 4-week period in October, 1942, or at the rate of 36.5 percent per quarter; this company did not furnish data for a period in 1941. In contrast, another Atlanta baker had reduced his labor turnover from 69 percent during the third quarter of 1941 to 46 percent during the corresponding quarter in 1942; 65 to 75 percent of his force consisted of women.

In Detroit, Mich., one baker reported that recently his labor turnover rate has been 7 percent (presumably per month) as compared with 2 percent a year ago. A second baker reported a turnover of 75 percent during the last 6 months as compared with 5 percent during the corresponding period last year. A third reported labor turnover at the rate of about 250 percent per annum in 1942 as compared with approximately 20 percent in 1941.

A baker in a Nebraska community reported recent labor turnover at the rate of approximately 8 percent per month as compared to 4 or 5 percent prior to March, 1941. In another Nebraska community, another baker reported that since April, 1942, his labor turnover has been 8 to 10 percent per month as compared to about 2 percent before that month. In a third Nebraska community, a baking company with a force of from 90 to 100 employees reported that about 50 employees left his service during the first three quarters of 1942 as compared with a turnover at the rate of 4 percent per annum 14 months ago.

In Cincinnati, Ohio, one baker compared a turnover of 48 percent this year with a turnover of 25 percent last year. One baking company in New York City hired 136 new employees during the quarter ended September 30, 1942, to maintain a force of 105 as compared with 138 hired during the corresponding quarter in 1941 in order to maintain a force of 125. Another New York baking company hired 370 new employees in order to maintain a force of 216 during the quarter ended September 30, 1942, as compared with 280 hired to maintain a force of 202 during the corresponding quarter in 1941.

Many baking companies that were not accustomed to compilation of labor turnover statistics prior to 1942 have become labor-turnover conscious and have commenced compiling such data. Several of these have been referred to above. A baker in Lakeland, Fla., with a total force of 42 employees, of which about one-half are in the bake shop, stated that he had sustained a turnover of 100 percent in the bake shop in the last 60 days. A baker in Tampa, Fla., with 24 employees in his plant, had also sustained a turnover of 100 percent in the last 90 days, and had only one keyman left; out of 6 routemen, 4 had been replaced. Another Tampa baker had lost about 20 out of 80 employees, with a 50 per cent loss in his bake shop. An Atlanta baker reported a 30 percent turnover during a "recent" period. A baking company operating in Wilmington, N. C., replaced 92 employees in a force of 124

during the third quarter of 1942. An Ohio baker with two plants of about 50 employees each reported a labor turnover of about 5 percent per month. Many other baking companies in Seattle, Minneapolis, St. Paul, New York City, Portland (Me.) and elsewhere, while not submitting specific data, have cited their large losses of employees in the Draft and to the war-work industries as having caused them great difficulties in maintaining adequate forces and increased operating costs, not only through rising average base wage rates but also through increased proportion of overtime work.

Direct Effects of High Labor Turnover. - As already intimated, one effect of this high labor turnover in the bread baking industry has been a progressive increase in wage rates, not through adjustment of the rates of workers already in the employ of the company (except as this has become necessary to put their rates into proper relationship to the wage rates paid new acquisitions) but through replacements at higher wage rates.

A second direct effect has been an under-manning of the bake shops for the work to be done to supply the route vehicles with the quantities of bread necessary for supplying the consuming public and a consequent increase in the amount and proportion of overtime work, which further increases the cost of operation because the overtime work must be remunerated at a rate that is one and one-half times the base hour-rates.

A third direct effect has been a relative inefficiency of the new employees during the period necessary for them to develop dexterity and skill in their work, resulting in more spoilage, reduced output per man-hour and prolonging the period in which overtime work is necessitated.

Indirect Effects of High Labor Turnover. - It is obvious that a large amount of industrial power, inclusive of man-power, is necessary to supply adequately the military, naval and air forces with equipment, ordnance, munitions and other material with which to carry on their operations effectively, adequately and successfully, but also that another large quantity of industrial power, inclusive of man-power, is necessary for the production of food and the other necessities of life with which to sustain adequately not only the military, naval and air personnel and the personnel engaged in the war-work industries but also to sustain the personnel engaged in production of these necessities of life, and to sustain the families of all this personnel, and that if the industrial power and man-power left to the production of these necessities of life is inadequate to serve the purpose in sufficient volume, the production of war material will suffer and the conduct of the military, naval and air operations will suffer, and that, if there is not sufficient man-power with which to man these classes of activity adequately and in correct proportions and at the same time to man non-essential industries and business at their normal peacetime strength, either additional man-power must be provided through the employment of women who normally would not be engaged in industry or man-power must be drawn away from the non-essential industries and business or that efforts be made to increase labor efficiency.

The great intensification of the rate of labor turnover in the baking industry (and, doubtless, in other peacetime industries and business as well) was the natural result, not only of the Draft, but of building up the labor forces in the war-work industries through the normal peacetime competitive process of offering in these industries wage rates that, after the exhaustion of the depression-period unemployed, were sufficiently high to attract personnel away from other employment. The continuance of this intensified rate of labor turnover is evidence of a shortage of utilized labor force with which to carry on the desired volume of production in the war-work industries and at the same time to carry on both the volume of production that is needed in the other essential industries and the volume of production that is desired by those conducting non-essential industries and business.

Certain non-essential production has been suspended by Government order, but not all. And the non-essential industries and business that have not been suspended are competing for personnel with the war-work and the other essential industries. This competition helps to intensify the rate of labor turnover, to the detriment both of the war-work industries and of the other essential industries.

According to the testimony of baking company managers, the situation created by this competition for an inadequate supply of labor has had important effects other than the forcing up of wage rates and the other direct effects noted under the preceding topic.

One important effect has been a growing spirit of independence in a considerable portion of the workers, an indifference to their responsibility for performance of the work assigned to them, disregard of regulations pertaining to shop conduct -- all seemingly based on the idea that the worker can easily find employment elsewhere at higher wages.

The manageress of a New Orleans baking company, the chief product of which was French bread, stated that many of her employees had obtained employment in other bakeries and were holding two jobs, working five to seven hours in her bakery followed, or preceded, by working a shift in the other bakery -- thereby earning two weeks wages in one week. However, after working for another baker for a couple of weeks, they became indifferent to the matter of whether the work assigned them was taken care of properly, and if a workman (presumably fatigued from carrying on two jobs) did not feel like working when time came to report, he simply claimed to be "sick" and did not come to work, thereby leaving the shift short-handed.

Another baker stated that, in the interests of sanitation and of preservation of equipment, he had certain rules of conduct and procedure in his bakery. Formerly, if, when making an inspection trip through his bakery, he observed any infraction of a rule, he spoke to the workman about it and, if the workman persisted in the infraction, he was discharged. More recently, if he spoke to a workman about any undesirable practice, the employee would walk out and obtain employment elsewhere.

A baking company in Minneapolis stated that it had a large loss of experienced operatives to the war-work industries and to the armed forces; that in replacing such losses with any help that applies, this help is usually inexperienced and not really anxious to work; and that many of these new employees work a few days, then absent themselves for one day, then return to work.

A baking company in another city complained about a large amount of absenteeism on Sundays.

A New Orleans baking company, which bakes both French bread and pan bread and which has been suffering from short-handed forces during the recent period of intensified labor turnover, stated that the labor contracts require a complete separation of the jobs in French bread making from the jobs in pan bread making. In consequence, when lacking an operative for the pan bread ovens, for example, the manager could not transfer a French bread oven operative to the job at the pan bread oven even though the French bread oven operative was fully qualified for the job but would have to let a pan bread oven go unmanned, or shut it down until the pan bread oven operative could be employed.

A complaint made frequently by baking company managers in New York City and in New England communities during the inquiry that was carried on during the Autumn of 1941 was to the effect that the routemen prevented them from rearranging and consolidating routes so as to eliminate routes with thin and unprofitable volume by absorbing the territory in other routes, because to permit such consolidation was to eliminate a job. There was less complaint on this score during the more recent inquiry, even though the mileage-reduction order by the Office of Defense Transportation necessitated such consolidations: the Draft and migration of routemen to other industries had created vacancies in jobs that offered opportunity to effect such rearrangements and consolidations of routes. However, resistance to such consolidation had persisted to some extent, according to some reports, this resistance taking the form either of objection to the elimination or of demand that the displaced routemen be retained on the company's payroll either temporarily or permanently.

This resistance to the elimination of unprofitable routes through consolidation is one expression of the desire of work people in ordinary times to preserve their jobs. This same desire, coupled with a widely held theory to the effect that there is only so much work to be done and that the course of action to take is to make the available work go around, is claimed to lead, in some instances, to resistance to the introduction of improved machinery and methods, and to the "slowdown." One baking company stated that resistance prevented it from making such improvements, thus compelling it to continue use of the old and relatively inefficient process.

Complaints alleging application of the "slowdown" by bakery forces have been made by bakers in several communities. The "slowdown," it is alleged, is applied for three purposes; viz: (1) as a means of putting

pressure upon the baking company to accede to a demand; (2) as a means of maintaining the maximum number of jobs; (3) as a means of creating the necessity for overtime work. As illustrations of the second and third purposes, a New England baker stated that there had been a chronic slowdown in his plant for more than a year, a slowdown of such degree as to add as much as 4 hours per day to the regular schedule. Another New England baker stated that operations in his plant had suffered from slowdown almost continuously since their labor contract was signed. The manager of a bakery in a Southern community stated that the operative who tends the divider, which does not require continuous concentrated attention, habitually spent much time in exhorting nearby operatives not to work too hard -- that there was no sense in working themselves out of a job. Some other bakers expressed suspicion of slowdown although they had no concrete evidence of it. However, the allegations as to the practice of the slowdown were isolated rather than general.

Another difficulty experienced by some baking companies in communities adjacent to military cantonments has related to the interpretation of the territorial rights of the routemen. The contract with a routeman may assign him certain territory and provide that he shall receive the stipulated rate of commission not only on sales and deliveries in his territory made by him directly but also on any other sales and deliveries made in his territory. The purpose of this provision is to cover emergency deliveries to customers in the routeman's territory. With the establishment of a military cantonment or of some other Governmental unit in such territory, a contract for a regular supply of bread would be made directly between the baking company and the Governmental agency. The routeman in whose previously assigned territory such Governmental unit was established would claim the regular commissions on these sales, notwithstanding the facts that he had had no part in the negotiation of the contract and that these deliveries were not sporadic emergency deliveries to any of the routeman's regular customers. Many of these contracts were of such volume as to require delivery of the bread by special truck; yet the routeman would contend that he was entitled to his regular commission on such sales. Where the amount of commission involved was small, say \$10 per week, the company would allow the commission rather than have a controversy and, perhaps, lose a dissatisfied salesman; and if the volume involved was not so large as to make it impractical for the route vehicle to carry this bread in addition to the regular load, the routeman would be permitted to make these deliveries in order to render some service in return for this additional commission. In one case, in which the deliveries were made in a large special truck, the amount of such commission in controversy was approximately \$10,000 a year as compared with about \$4,300 a year of commissions on the deliveries by the routeman to his own regular customers. These commissions, where conceded, naturally made delivery cost unnecessarily high. Of course the remedy whereby to avoid such situations in the future is amendment of the contract form so as clearly to limit such extra commissions to sporadic emergency deliveries to the routeman's regular customers and as to exempt large contracts for continuing service that require delivery in special trucks.

Another baker claimed that a few of his employees of long service were taking advantage of the labor shortage to demand special privileges for themselves at the company's expense.

Increase of Productive Labor Costs per 100 Pounds of Bread and Importance Thereof. - How much has the increase in wage rates through migration and otherwise increased the cost per unit of bread and rolls? How important is labor cost in the production of bread and rolls?

Table 2, which follows presents a summary of the results of comparative data obtained in this Inquiry from wholesale bakers in six areas in the United States. These statistics compare results in an accounting period that included March 31, 1942, with results in an accounting period that included September 30, 1942.

Table 2. Comparison of Total Quantities of Bread and Rolls Produced, of Average Costs per 100 pounds for Total Cost Produced and Wrapped and for Productive Labor, for Wholesale Bakers in 6 areas, for Accounting Periods including March 31, 1942, and September 30, 1942

	Total Pounds Produced		Average Cost Per 100 Lbs.			
			To Produce and Wrap		For Productive Labor	
	Mar. 31, 1942	Sept. 30, 1942	Mar. 31, 1942	Sept. 30, 1942	Mar. 31, 1942	Sept. 30, 1942
Wholesale Area No. 1	137,572,043	155,339,429	\$4.79	\$4.86	\$0.77	\$0.83
Wholesale Area No. 2	20,150,778	23,569,092	4.68	4.77	0.67	0.72
Wholesale Area No. 3	62,462,914	69,535,762	4.77	4.83	0.73	0.80
Wholesale Area No. 4	78,442,321	79,867,901	3.82	4.49	0.60	0.75
Wholesale Area No. 5	9,900,314	12,867,901	4.43	4.71	0.82	0.97
Wholesale Area No. 6	31,335,869	35,176,931	4.38	4.58	0.69	0.78
Total or Average	339,864,239	376,357,154	4.51	4.74	0.71	0.80

Wholesale Area No. 1 includes Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, District of Columbia, Delaware, Virginia and West Virginia.

Wholesale Area No. 2 includes North Carolina, South Carolina, Georgia, Florida, Tennessee, Mississippi and Alabama.

Wholesale Area No. 3 includes Ohio, Indiana, Illinois, Wisconsin, Michigan and Kentucky.

Wholesale Area No. 4 includes Louisiana, Texas, Arkansas, Kansas, Missouri, Iowa, Nebraska, South Dakota, North Dakota, Montana, Minnesota, Colorado and Oklahoma.

Wholesale Area No. 5 includes Washington, Oregon, Utah, Wyoming and Idaho.

Wholesale Area No. 6 includes California, Arizona, New Mexico and Nevada.

The foregoing table compares productive labor costs and total production and wrapping cost per 100 pounds of bread and rolls for 339,864,239 pounds produced by wholesale bakers in 6 areas during an accounting period that included March 31, 1942 with the like costs for 376, 357,154 pounds produced by the same bakers during a corresponding period that included September 30, 1942.

It will be seen that from the earlier to the later accounting period the average productive labor cost increased from 71 cents to 80 cents per 100 pounds -- an increase of 9 cents per 100 pounds or 9/10 of a mill per pound. The increase ranged, in different areas, from 5 to 15 cents per 100 pounds. The average increase was 12-2/3 percent.

It is noteworthy that so large a percentage of increase should result in so small an increase in the productive labor cost per pound. The reason is that, in pan-bread baking, which is highly mechanized in most large bakeries, labor cost is a small part of the total cost of the bread produced and wrapped. This is evidenced by the fact that the average productive labor cost per 100 pounds of bread and rolls was only 71 cents in a total of \$4.51, or 15.74 percent of the total, during the earlier period, and only 80 cents in a total of \$4.74, or 16.88 percent of the total, during the later period.

The table shows that the average total cost to produce and wrap the bread and rolls increase from \$4.51 cents per 100 pounds during the earlier period to \$4.74 per 100 pounds during the later period. The average increase was 23 cents per 100 pounds, and ranged, in different areas, from 6 cents to 67 cents. The increase in the total cost, although only 5.1 percent as compared with the average increase of 12-2/3 percent in productive labor cost, was much greater than the labor cost increase in cents per hundred pounds. This again is due to the fact that labor costs are relatively unimportant in comparison with materials costs.

Section 11. Premiums

The practice of giving premiums or coupons redeemable in bakery goods or other commodities is not extensively used in the baking industry at present. Of 124 bakers interviewed who definitely stated their practice, only five stated that they were giving premiums or coupons of any kind. Of 438 wholesale bakeries from which report forms were obtained and tabulated up to November 29, only 37, about 8.5 percent, were giving premiums and 19 of these bakeries were units of one of the four largest wholesale baking companies.

The total cost of premiums given, the gross sales, total poundage of bread produced and cost of premiums per \$1.00 of sales and per 100 pounds of bread sold for the 37 bakeries were divided as between the 19 units of one national baking company and all other bakeries reporting as follows:

Group	Premiums Given	Total Sales Bread and Rolls	Total Pounds Bread and Rolls Produced	Per \$1.00 of Sales (Cents)	Per 100# Bread (Cents)
19 bakeries of 1 company	\$ 3,901	\$2,716,997	\$34,273,266	.1436	1.14
18 other bakeries	8,483	1,020,365	12,834,562	.8313	6.61
Total 37 bakeries	12,384	3,737,362	47,107,828	.3314	2.63

For these companies, the cost of premiums and coupons averaged about 3 mills per dollar of sales or about 2.6 cents per hundred loaves of bread. Incidentally, however, it will be noted that the average unit cost to the 19 bakeries owned by one big company was only about 1/6 that of the average unit cost to the other 18 bakeries.

Savings that might be accomplished by the elimination of premiums are small and confined entirely to relatively few companies that give premiums. The sporadic practice, however, is generally condemned as an evil by the baking industry, and should be discontinued throughout the industry.

Section 12. Returns on Investment and Profits on Sales - Bread Baking Industry

Introduction. - Information concerning the profitableness of the operations of the bread baking companies from which financial data were obtained is presented in this section of the report in terms of return on capital investment and profit or loss on sales.

Usable financial data were obtained in this inquiry from a maximum of 309 companies with plants located in all parts of the United States. Such information was received from the four largest companies in the industry, as well as from a representative number of other large, small, and medium sized companies.

Returns on investment and profits on sales are presented for the year 1941 and for the period in 1942 to the latest available date for the companies from which financial data were obtained in this inquiry, and for the years 1936 to 1940, inclusive, for a smaller number of companies from which such information was obtained in the Commission's 1941 inquiry into the bread baking industry.

Returns on Investment. - Rates of profit or loss in relation to total investment are presented herein for all companies combined and for groups of companies according to size, based upon their sales in 1941.

The total investment represents the par or stated value of the companies' capital stocks outstanding, surplus, and long-term debt.

Returns on the total investment were computed by relating to the average of the investment at the beginning and end of each year, the net income before deduction of interest on long-term debt and provisions for income and excess profits taxes.

That the bread baking industry in general has been profitable, and particularly so during 1942, is indicated in the following table. This table shows for each of the years 1936-1942, the average rate of return earned on the total investment, classified according to the number of companies doing a wholesale business and the number doing a house-to-house business:

Number of Companies			Rates of Return *		
	House to House	Total		House to House	
Wholesale			Wholesale (percent)	House (percent)	Average (percent)
1936	37	45	11.04	11.20	11.05
1937	42	52	10.32	10.98	10.37
1938	46	56	12.41	18.74	12.92
1939	46	58	11.21	16.36	11.62
1940	46	58	10.58	13.16	10.79
1941	271	301	10.91	10.54	10.91
1942	235	263	15.85	10.99	15.59

* Before provision for income and excess profits taxes.

The following tabulation summarizes for all companies the returns on total investment for 1941 and 1942 by size groups, based upon the sales of the companies in 1941:

Sales Group	Number of Companies Reporting Profits		Number of Companies Reporting Losses		Average Rate of Profit (percent)	
	1941	1942	1941	1942	1941	1942
Under \$500,000.....	132	126	35	15	10.03	18.37
\$500,000 to \$1,000,000.....	60	62	12	2	13.39	21.77
\$1,000,000 to \$20,000,000.....	50	51	8	3	12.78	17.46
Over \$20,000,000.....	4	4	0	0	9.19	12.81
Total.....	246	243	55	20	10.91	15.59

The rates of return for identical companies from which financial data were obtained in 1941 and 1942, were substantially the same, as shown above for all reporting companies. In 1941 reports were received from 46 companies which did not report financial information for 1942, and in 1942 reports were received from 8 companies which did not report such information for 1941. The following tabulation compares the results on the basis of total investment.

Returns for Identical Companies Only

Sales Group	Number of Companies Reporting Profits		Number of Companies Reporting Losses		Average Rate of Profit (percent)	
	1941	1942	1941	1942	1941	1942
Under \$500,000.....	108	120	26	14	10.37	18.81
\$500,000 to \$1,000,000.....	53	62	11	2	13.73	21.77
\$1,000,000 to \$20,000,000.....	46	50	7	3	12.98	17.44
Over \$20,000,000.....	4	4	0	0	9.19	12.81
Total.....	211	236	44	19	10.98	15.60

Profits for the 211 companies ranged from 0.04 percent to 97.18 percent of investment in 1941; and for the 236 companies the range was from 0.60 percent to 114.62 percent in 1942. The losses reported by 44 companies in 1941 ranged from 0.52 to 102.92 percent, while the losses reported by 19 companies in 1942 ranged from 0.42 to 114.24 percent. The low and high rates of profit and loss on total investment for other companies is shown for 1941 and 1942 by size groups, based upon the 1941 sales of the companies, in the following tabulation:

	Rates of Profit			
	1941		1942	
	Low	High	Low	High
Under \$500,000.....	0.04	97.18	0.93	114.62
\$500,000 to \$1,000,000.....	2.46	61.77	1.16	120.23
\$1,000,000 to \$20,000,000.....	0.32	77.27	0.60	81.22
Over \$20,000,000.....	1.81	13.38	5.98	19.22
	Rates of Loss			
	1941		1942	
	Low	High	Low	High
Under \$500,000.....	0.52	102.92	0.42	114.24
\$500,000 to \$1,000,000.....	1.16	70.44	2.46	5.94
\$1,000,000 to \$20,000,000.....	0.94	18.00	1.77	14.41
Over \$20,000,000.....	0.00	0.00	0.00	0.00

The following table shows the number of companies falling in each 5 percent profit or loss group in 1941 and 1942.

Profit or Loss Groups Percent	Number of Companies Reporting Profit		Number of Companies Reporting Loss	
	1941	1942	1941	1942
Under 5.....	38	21	19	4
5 to 10.....	42	33	8	6
10 to 15.....	31	37	8	2
15 to 20.....	27	35	2	1
20 to 25.....	22	25	1	0
25 to 30.....	16	32	0	1
30 to 35.....	11	12	1	1
35 to 40.....	7	11	0	0
40 to 45.....	4	5	0	0
45 to 50.....	4	4	0	0
50 to 55.....	5	7	0	0
55 to 60.....	1	3	0	0
60 to 65.....	1	1	0	0
65 to 70.....	0	4	1	0
70 to 75.....	0	0	1	1
75 to 80.....	1	0	0	0
80N to 85.....	0	1	0	0
85 to 90.....	0	0	0	0
90 to 95.....	0	1	0	0
95 to 100.....	1	1	1	0
Over 100.....	0	3	2	3
Total identical companies.....	211	236	44	19

Profits on Sales. - In this inquiry, information concerning sales and profits on sales was tabulated for 300 companies for the year 1941 and for 261 companies for the year 1942. Such information for the years 1936-1940 was obtained in the Commission's 1941 inquiry into the bread baking industry and is available for a smaller number of companies for those years.

The following tabulation shows the ratios of profits earned on net sales, expressed in cents per dollar of sales, of the reporting companies for the years 1936 to 1942, inclusive, classified according to the number of companies that do a wholesale business and those doing a house-to-house business.

Year	Number of Companies			Average Profit on Net Sales		
	Whole-sale	House-to-House	Total	Whole-sale	House-to-House	Average
				(Cents)	(Cents)	(Cents)
1936.....	37	9	46	5.62	4.65	5.54
1937.....	41	10	51	4.67	4.41	4.65
1938.....	46	10	56	6.10	7.83	6.26
1939.....	46	12	58	5.58	6.67	5.69
1940.....	46	12	58	5.09	5.02	5.08
1941.....	269	31	300	4.38	2.78	4.25
1942.....	232	29	261	6.18	3.07	5.95

The profits in relation to net sales for the years 1941 and 1942 are further summarized in the following table. This table shows the profits for the wholesale and house-to-house companies grouped according to size based on their sales in 1941.

	Number of Companies		Average Profit on Net Sales	
			(Cents)	
	1941	1942	1941	1942
Wholesale Companies				
Under \$500,000.....	151	124	2.84	4.68
\$500,000 to \$1,000,000.....	66	60	4.29	6.23
\$1,000,000 to \$20,000,000.....	48	44	4.63	6.65
Over \$20,000,000.....	4	4	4.52	6.03
Total.....	269	232	4.38	6.18
House-to-House Companies				
Under \$500,000.....	15	15	2.02	3.14
\$500,000 to \$1,000,000.....	6	4	0.70*	1.52
\$1,000,000 to \$20,000,000.....	10	10	3.57	3.24
Total.....	31	29	2.78	3.07
Wholesale and House-to-House.....	300	261	4.25	5.95

* Denotes loss.

In 1941, 234 of the 300 companies earned profits and 66 sustained losses. Of the 234 that earned profits, 212 were wholesale companies and 22 were house-to-house companies. The range in profits for the wholesale companies was from 0.19¢ to 20.89¢ per dollar of net sales, while the profits earned by the house-to-house companies range from 0.32¢ to 10.34¢ per dollar of net sales. The net losses sustained by 57 wholesale companies ranged from 0.03¢ to 16.93¢ per dollar of net sales, while the losses sustained by 9 house-to-house companies ranged from 0.86¢ to 3.19¢ per dollar of net sales.

In 1942, 235 of the 261 companies reported profits and 26 reported losses. Of the 235 that reported profits, 210 were wholesale companies and 25 were house-to-house companies. The profit range

for the wholesale companies was from 0.42¢ to 22.75¢ per dollar of net sales, while the profit range for the 25 house-to-house companies was from 0.34¢ to 13.28¢ per dollar of net sales. Of the 26 companies that reported losses in 1942, 22 were wholesale companies and 4 were house-to-house companies. The ratio of loss for the wholesale companies ranged from 0.01¢ to 9.63¢ per dollar of net sales, while the losses for the house-to-house companies ranged from 0.99¢ to 4.70¢ per dollar of net sales.

The following tabulation shows for the years 1941 and 1942 the low and high rates of profit and loss on net sales, expressed in cents per dollar of net sales for the companies that do a wholesale business and for those that do a house-to-house business, by size groups based upon the sales of the companies in 1941.

	1941			
	Net Profit on Sales		Net Loss on Sales	
	Low	High	Low	High
<u>Wholesale</u>				
Under \$500,000.....	0.19	20.89	0.11	16.93
\$500,000 to \$1,000,000.....	0.37	18.58	0.03	4.39
\$1,000,000 to \$20,000,000.....	0.69	15.24	0.07	5.51
Over \$20,000,000.....	0.37	6.07	0.00	0.00
<u>House-to-House</u>				
Under \$500,000.....	0.32	10.34	0.86	2.03
\$500,000 to \$1,000,000.....	0.55	1.03	0.93	3.09
\$1,000,000 to \$20,000,000.....	0.39	7.83	1.56	3.19
	1942			
	Net Profit on Sales		Net Loss on Sales	
	Low	High	Low	High
<u>Wholesale</u>				
Under \$500,000.....	0.42	22.75	0.01	9.63
\$500,000 to \$1,000,000.....	0.73	19.87	0.25	1.63
\$1,000,000 to \$20,000,000.....	0.88	19.03	0.10	4.74
Over \$20,000,000.....	2.43	7.57	0.00	0.00
<u>House-to-House</u>				
Under \$500,000.....	0.34	13.28	0.99	4.70
\$500,000 to \$1,000,000.....	0.49	3.07	0.00	0.00
\$1,000,000 to \$20,000,000.....	0.35	8.23	2.08	2.08

Section 13. Officers' Salaries

In this inquiry, the Commission requested each bread baking company to list the total salary and other remuneration paid to each principal executive officer and to each employee and each officer, other than a principal executive officer, who received remuneration in excess of \$25,000 during the last complete fiscal year.

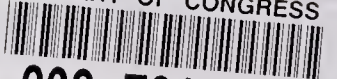
Reports listing officers' salaries and other remuneration were received from 243 bread companies, and, in addition, 155 companies reported no officer or employee received total remuneration in excess of \$25,000 during the year 1941. The following tabulation shows the range of the total remuneration paid to the officers of the 243 companies reporting such information:

Total Remuneration Year 1941	No. of Officers	Percent of total number of officers
Under \$5,000.....	248	39.12
\$5,000 to \$10,000.....	226	35.65
\$10,001 to \$15,000.....	78	12.30
\$15,001 to \$20,000.....	38	5.99
\$20,001 to \$25,000.....	25	3.94
Over \$25,000.....	19	3.00
Total number of officers.....	634	100.00

As reported by the companies, only 19 officers, or three percent of the total number of officers listed, received total remuneration in excess of \$25,000 during the fiscal year 1941. The highest remuneration reported was \$52,000, which was received by the president of one of the largest baking companies. Only one company paid as many as three officers in excess of \$25,000 during 1941, three paid two officers in excess of \$25,000 each, and the remaining 10 officers receiving total remuneration in excess of \$25,000 were divided among that number of companies.

The table further indicates that over 39 percent, or nearly two-fifths, of all officers' salaries reported were less than \$5,000 during the year 1941; over one-third were from \$5,000 to \$10,000; approximately one-eighth were from \$10,001 to \$15,000; about six percent were from \$15,001 to \$20,000, and slightly less than four percent were from \$20,001 to \$25,000.

Many of the smaller bread baking concerns are not incorporated and the proprietors or partners do not receive salaries, but obtain their compensation from the division of profits. Consequently, the remuneration of such proprietors or partners was not included in the foregoing tabulation.

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